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textile bulletin

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BPA NBP

NON-FLUID OIL
TRADE MARK REGISTERED

THE MOST IMITATED LOOM LUBRICANT

NON-FLUID OIL is the most widely used lubricant for weave room lubrication . . . and no doubt is the most imitated product being offered to textile mills.

Because of this, we caution against use of grease mixtures sold as being equivalent to NON-FLUID OIL. So-called specification-type oils will not remain in or on the bearings; they all have the same drawback of failing to give positive lubrication and getting on warps and woven goods.

NON-FLUID OIL enables you not only to show an actual saving on lubrication expense (regardless of first cost), but also to effect worthwhile savings on the cost of machinery maintenance. What's more—by keeping machines in steady service and preventing oil-spot "seconds," NON-FLUID OIL appreciably increases your production.

Send for instructive Bulletin T-20 and free sample of NON-FLUID OIL and make your own economy test.

NEW YORK & NEW JERSEY LUBRICANT CO.
292 Madison Avenue, New York 17, New York

Southern District Manager: Lewis W. Thomason, Jr., Charlotte, N. C.

WAREHOUSES: Atlanta, Ga., Birmingham, Ala., Charlotte, N. C., Chicago, Ill., Columbus, Ga., Detroit, Mich., Greensboro, N. C., Greenville, S. C., Providence, R. I., St. Louis, Mo., Springfield, Mass.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufa ure. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

Clamping Sword Construction
X-2 type illustrated.
Similar swords available for
X series and E model looms.

Cam Shaft Gear and Hub
X-2 assembly illustrated.
Similar assemblies available
for XD and XP model looms.

#524 Temple
Currently available
for X and X-2 models.

X-2 Model Loom

Transmitter
Type Drive

Next to new looms . . .

Looms equipped with the latest mechanisms and improved repair parts, *designed and built by the original manufacturer*, will meet today's rugged performance requirements.

Draper improved repair parts and mechanisms — some of which are illustrated above — are designed to increase loom production, efficiency, and flexibility.

Lower maintenance costs and ease of application are additional benefits derived from the use of Draper repair parts and mechanisms.

Equipped with Draper improved repair parts and assemblies, your existing looms will be second only to *new Draper looms.*

DRAPER
CORPORATION

Hopedale, Mass. *Atlanta, Ga.* *Greensboro, N. C.* *Spartanburg, S. C.*

For accurate fit...

For sound yarn packages...

For smooth delivery...

use SONOCO precision-made CONES

SONOCO cones are made to fit the winding mandrel accurately. This feature is combined with special SONOCO cone surfaces, developed through extensive research, to produce a cone which permits precision winding. The result is a sound package that will deliver at even tension under high speed working conditions.

SONOCO cones are made in a wide variety of tapers and finishes to suit every kind of yarn. Various methods for yarn identification can also be supplied. For complete information, and help with your yarn packaging problems, consult your SONOCO sales-engineer, or write us direct.

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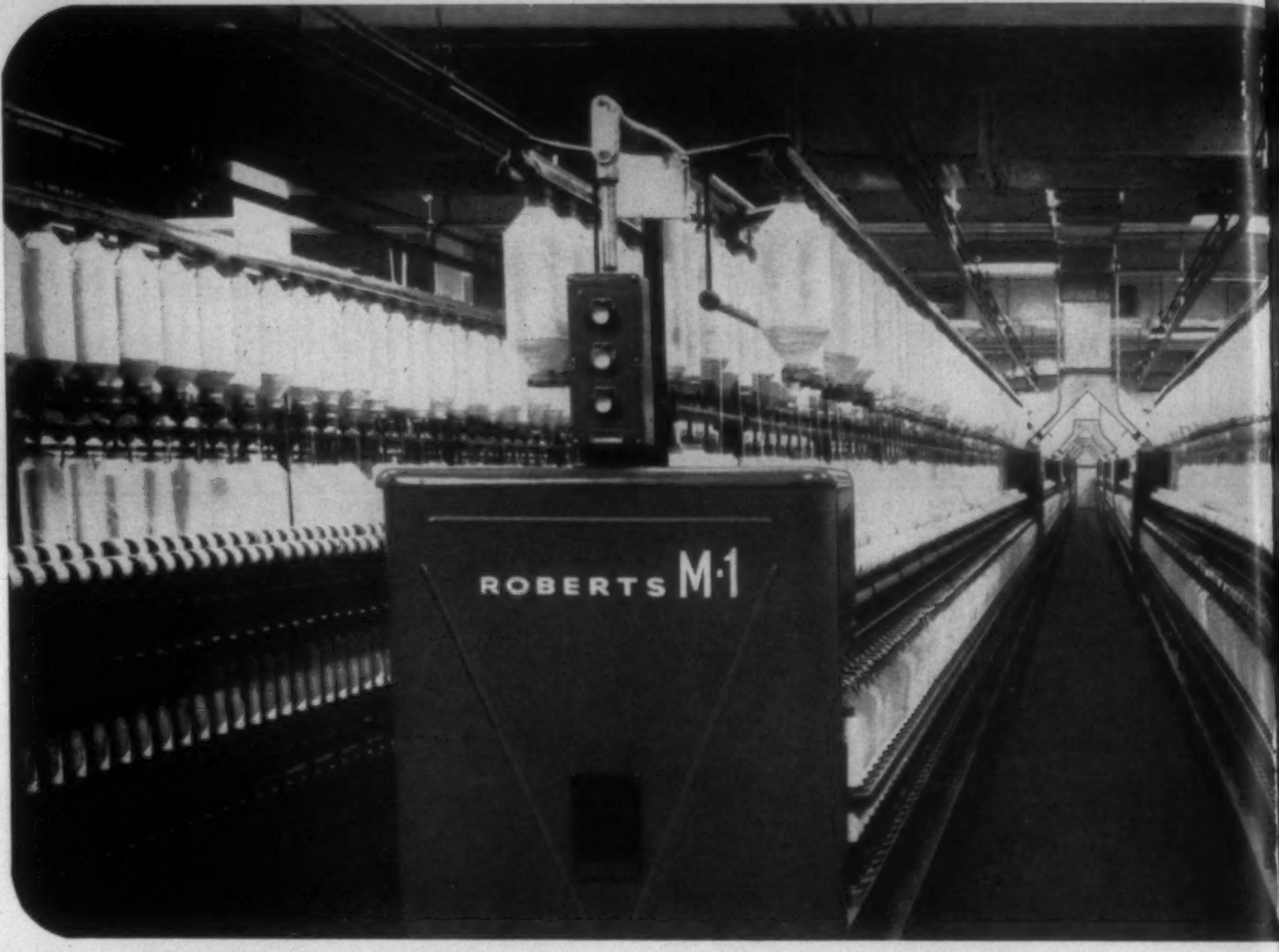
DEPENDABLE SOURCE OF SUPPLY



ROBERTS SPINNING

Today's standard for production, yarn quality and investment

Roberts Spinning is setting today's standard for comparison in high drafts, package sizes, roving bobbin sizes, front roll speeds, ends up, yarn break factor—and at the lowest investment cost per spindle.

TRIED AND PROVEN. The Roberts M-1 Spinning Frame is simple and straightforward, free from radical innovations or gadgets. Its design has already been tried and proven in many successful applications. It embodies all the ball bearing features most wanted in a modern spinning frame, giving highest production and lowest maintenance.

ROBERTS DRAFTING. Roberts Double-Apron Drafting produces highest break factors, best yarn evenness and lowest ends down in a range of drafts from 10 to 60, for yarn numbers from 2's to 100's, in cotton, synthetics with staples up to 3 inches long, or blends.

LARGE PACKAGE FLEXIBILITY. One basic model of the Roberts M-1 Spinning Frame is adapted to run warp bobbins with lengths from 10 inches to 12 inches as well as filling quills. Standard gauges from 3 inches to 4½ inches can be arranged to employ the maximum desirable ring size suitable for the yarn number and twist constant.

RUGGEDNESS WITH SIMPLICITY. The frame chassis is of rugged construction. The working motions use ball bearings for every turning and oscillating motion where practical. The all-ball-bearing head design is outstanding in its simplicity and flexibility. All gears in the head are hardened and have one pitch, one width, one bore and one keyway, making them completely interchangeable. Greased-for-life bearings are used in the head and all plain bearings and studs are eliminated. Draft and lay constants are adjusted simply over the complete range of yarn numbers.

STANDARD FEATURES. Standard equipment includes Roberts Ball Bearing Spindles, Roberts built-in UnitVac Suction Cleaning. Roberts AeroCreels are available in every desired package size, single or double.

Part of a spinning room in a mill with over 100 Roberts 25-inch Spinning Frames.

ROBERTS SPINNING AVAILABLE IN 3 FORMS PROVIDES MODERNIZATION AT LOWEST COST

The cost-cutting, performance, and quality features of Roberts Spinning can be obtained through changeovers to the mills' existing spinning frames, or through rebuilt frames supplied by Roberts, as well as Roberts M-1 Spinning Frames. Roberts Proposals for Spinning Modernization provide comparison on these 3 methods.

CHANGEOVERS to the mills' existing machinery can include drafting systems, spindles, creels, suction cleaning, tape drive, gearing, or any combination of these to provide the maximum return for minimum expenditures. Performance equal to new can be built into mills' existing machinery if desired in every manner and form.

ROBERTS MODEL 55-R REBUILT FRAMES provide complete new spinning performance making use only of non-functional support members of older frames, thus affecting a substantial savings and taking advantage of the all-new spinning performance and features identical to all-new frames.

ROBERTS M-1 SPINNING FRAMES are excitingly new from the ground up, with all ball bearing features. They are available in 39 inch, 36 inch, and the space-saving 25 inch widths.

ROBERTS COMPANY
SANFORD, NORTH CAROLINA

ROBERTS SPINNING NEWS

TOP ROLL SUSPENSION USES BALL BEARINGS IN ALL THREE LINES

The Roberts Ball Bearing Top Roll Suspension System uses double-row ball bearings in front, middle and back lines and incorporates many other important design advantages.

Cots have ½" hole diameter, revolve together making lap removal simpler, and are buffed on standard equipment, without attachments. Full length revolving clearers are used.

Front and back rolls are interchangeable making sequence buffing possible.

The double-row bearing raceways are ground directly into ½" shafts. Bearings are grease-packed for life and a 2-piece labyrinth seal protects them from lint entrance and roll picker damage.

The system has controlled self-alignment. Conventional deadweighting or new spring weighting is optional.

An alternate arrangement also available employs a ball bearing top roll and special suspension on the front line only with Roberts Cap Bars and solid top rolls on middle and back top rolls.

Roberts also continues to offer its No-Oil Cap Bar and Saddle system for all three lines, now installed in more than 2½ million spindles.

ROBERTS M-1 SPINNING FRAMES MADE IN THREE WIDTHS

Where it is desirable to match frame widths already in the mill, Roberts makes and incorporates all of its design features of its new frames in standard 36 and 39 inch widths. All the ball bearing features and details are built into these wider frames.

The Roberts M-1 25 inch wide Spinning Frame permits 5 frames instead of 4 in a 25 foot mill bay, retaining 30-inch aisles and increasing yarn production 25% in the same place.

Creel designs have been arranged for the frames to handle 12 by 7 roving packages on as low as a 3-inch gauge frame. 10 by 5 double creels are designed for 3½ inch and larger gauges. In all cases, widths and heights of creel are not excessive with consideration being given for ease of creeling for the operators.

ROBERTS "TURNKEY" ERECTION SERVICE

Roberts "Turnkey" Erection Service is available in all 3 modernization arrangements: buying complete new spinning frames, buying modernized frames, or changing over the frames on your floor. In each arrangement, Roberts is entirely responsible for installation and performance.

DISCOVERED!

Many New Uses for

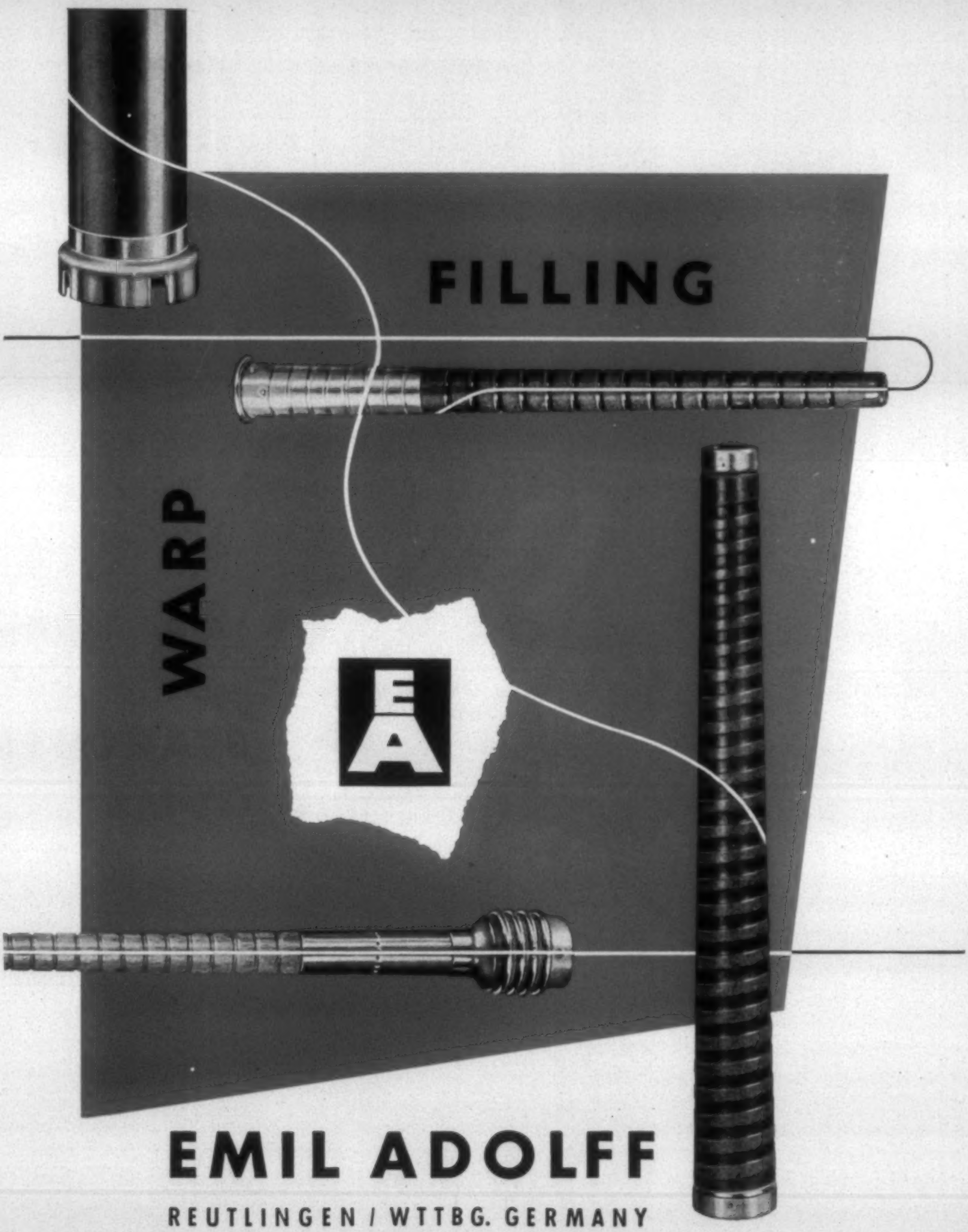
...Sulphonated Oils in textile processing

Ever-increasing uses of Jacques Wolf & Co. sulphonated fatty oils have made them more popular than ever before! These uses are being discovered daily by mills who now employ these versatile surface-active agents for imparting a soft full hand, plasticizing, scouring and lubricating in dyeing, finishing and other processing applications. Advanced methods of sulphonation have made them better than ever . . . their new uses have made them more valuable than ever. Check their amazing versatility soon! You, too, will be surprised!

Write for samples and further information on the complete line of sulphonated oils to Jacques Wolf & Co., leading sulphonator for over half a century.

JACQUES WOLF & CO.
Chemicals PASSAIC, N.J.

Plants in: Clifton, N.J., Carlstadt, N.J., Los Angeles, Calif.



EMIL ADOLFF

REUTLINGEN / WTTBG. GERMANY

U. S. A. Central Organization—Textube Corporation, 695 Summer St., Stamford, Conn.

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301 ½ West Fourth Street
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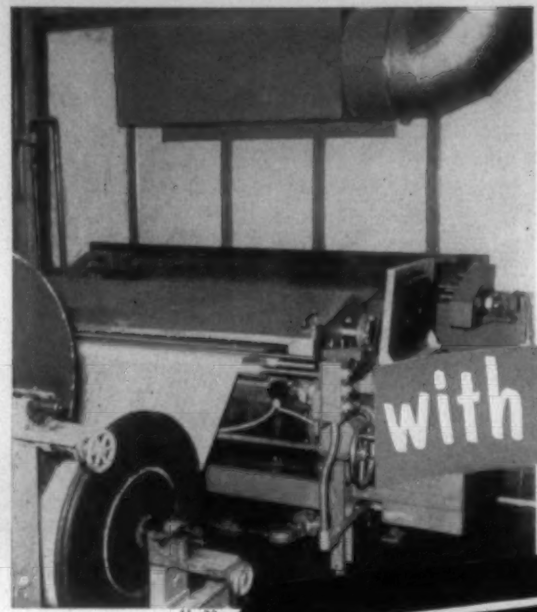
Crowther Limited
212-214 Victoria Ave.
Westmount, Montreal, P. Q.

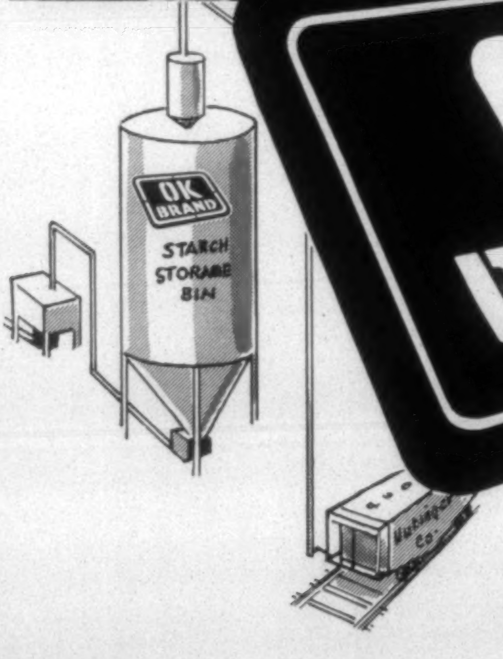


improve your sizing, printing, finishing . . .

with the Greatest of Ease

with

OK BRAND



STARCHES and GUMS

There's a complete line of superior, quality controlled, OK BRAND textile starches and gums to help you get improved finishing, printing and sizing, reduce your costs, and assure you of consistent quality in your production.

You can enjoy all these benefits with the greatest of ease because better, more convenient systems for handling starches and gums have been developed by Hubinger textile experts. One of these trained, experienced textile technicians is near-by, prepared to help with any *special problems* you may have, too. For prompt attention to your needs without obligation, write, wire or phone:

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(Phone: Franklin 6-5583)

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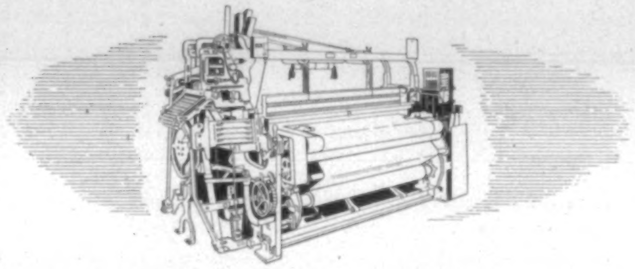
The Hubinger Company

KEOKUK, IOWA

HUBINGER
QUALITY PRODUCTS from CORN
76 YEARS

BE SURE

you get the TOP PERFORMANCE that's built into every C&K LOOM



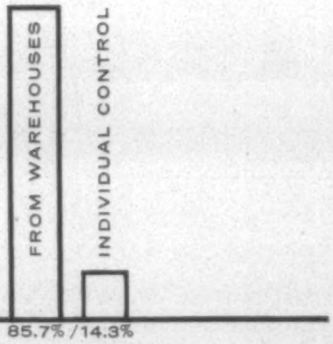
BE SURE

you use only LOOM PARTS made by C&K

. . . and here's proof that mills find it pays to buy C&K:

85.7% of all maintenance items sold in 1956 were *on hand* and *shipped* from strategically located warehouses.

The balance, a mere 14.3%, was processed through C&K shops on an *individual control* basis for prompt shipment.



CROMPTON & KNOWLES BY C&K CORPORATION · WORCESTER, MASS. · U.S.A.

CROMPTON & KNOWLES
Corporation
MANUFACTURER OF
THE WORLD'S LONGEST LINE OF AUTOMATIC BOX LOOMS

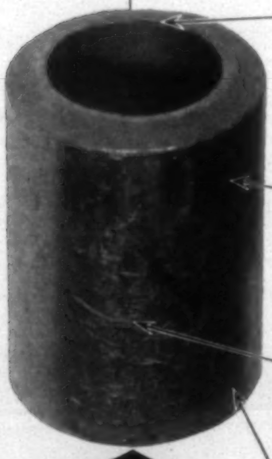
●

WORCESTER 1, MASSACHUSETTS, U. S. A.
CHARLOTTE, N. C. • PHILADELPHIA, PA. • ALLENTOWN, PA.
Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.
Crompton & Knowles of Canada Ltd., Montreal, Quebec

WHICH IS THE BEST MONEY VALUE?

ALL lifter rod bushings are NOT the same!

TROUBLE-SHOOTING FOR A MILL, WE COMPARED THE "FOUNDRY" LIFTER ROD BUSHING IN USE WITH THE GENUINE SACO-LOWELL REPLACEMENT PART. THE FOLLOWING IMPORTANT DIFFERENCES WERE DISCOVERED:



FOUNDRY BUSHING

1. The edges of the foundry bushing are very sharp and can cut into the lifter rod.

1A. THE SACO-LOWELL BUSHING HAS BEEN CAREFULLY WORKED TO REMOVE ALL BURRS AND TO CHAMFER ALL INTERNAL EDGES, THEREBY PREVENTING SCORING AND GALLING ON THE LIFTER ROD.

2. The foundry-made bushing does *not* have a groove for the clip in the spindle rail. This lets the bushing move out of the correct position, causing excessive wear of the lifter rod.

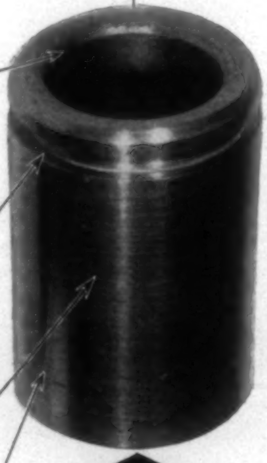
2A. THE SACO-LOWELL BUSHING HAS AN OUTSIDE GROOVE SO THAT THE CLIP IN THE SPINDLE RAIL WILL HOLD THE BUSHING IN THE CORRECT POSITION.

3. The foundry bushing is made of *low* quality sintered metal, *without* close tolerance machining. It has a rough outer surface as can be seen in the photograph.

3A. THE SACO-LOWELL BUSHING IS MACHINED TO CLOSE TOLERANCES OF THE I.D. AND HELD WITHIN RIGID TOLERANCES REGARDING CONCENTRICITY. IT IS MANUFACTURED OF CAST IRON AND OIL IMPREGNATED.

4. The foundry-made bushing is not tapered.

4A. THE SACO-LOWELL LIFTER ROD BUSHING IS TAPERED ON THE LOWER HALF OF THE OUTSIDE DIAMETER TO PERMIT EASIER INSTALLATION AND ASSURE CORRECT ALIGNMENT WITHIN THE SPINDLE RAIL.

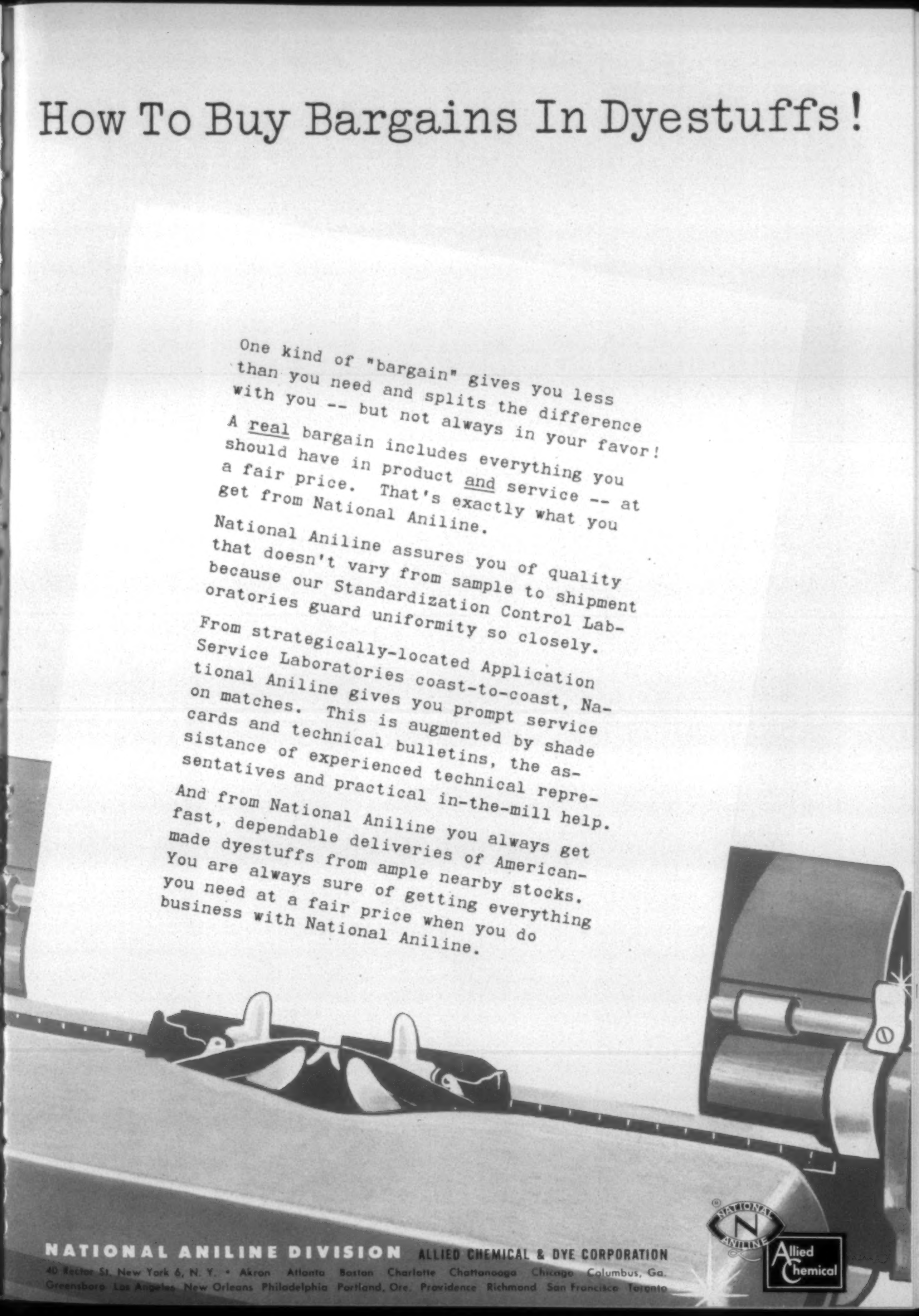


SACO-LOWELL BUSHING

Saco-Lowell bushings were found to be superior in quality, workmanship and design. In lifter rod bushings — as in all Replacement Parts — Saco-Lowell is your BEST MONEY VALUE. To keep quality and production high, use Genuine Saco-Lowell Replacement Parts — They last longer and perform better.

SACO-LOWELL-SHOPS

60 BATTERYMARCH STREET, BOSTON 10, MASS.
Shops at BIDDEFORD and SACO, MAINE; and SANFORD, N.C. Sales Offices CHARLOTTE · GREENSBORO · GREENVILLE · ATLANTA



How To Buy Bargains In Dyestuffs!

One kind of "bargain" gives you less than you need and splits the difference with you -- but not always in your favor!

A real bargain includes everything you should have in product and service -- at a fair price. That's exactly what you get from National Aniline.

National Aniline assures you of quality that doesn't vary from sample to shipment because our Standardization Control Laboratories guard uniformity so closely.

From strategically-located Application Service Laboratories coast-to-coast, National Aniline gives you prompt service on matches. This is augmented by shade cards and technical bulletins, the assistance of experienced technical representatives and practical in-the-mill help.

And from National Aniline you always get fast, dependable deliveries of American-made dyestuffs from ample nearby stocks. You are always sure of getting everything you need at a fair price when you do business with National Aniline.

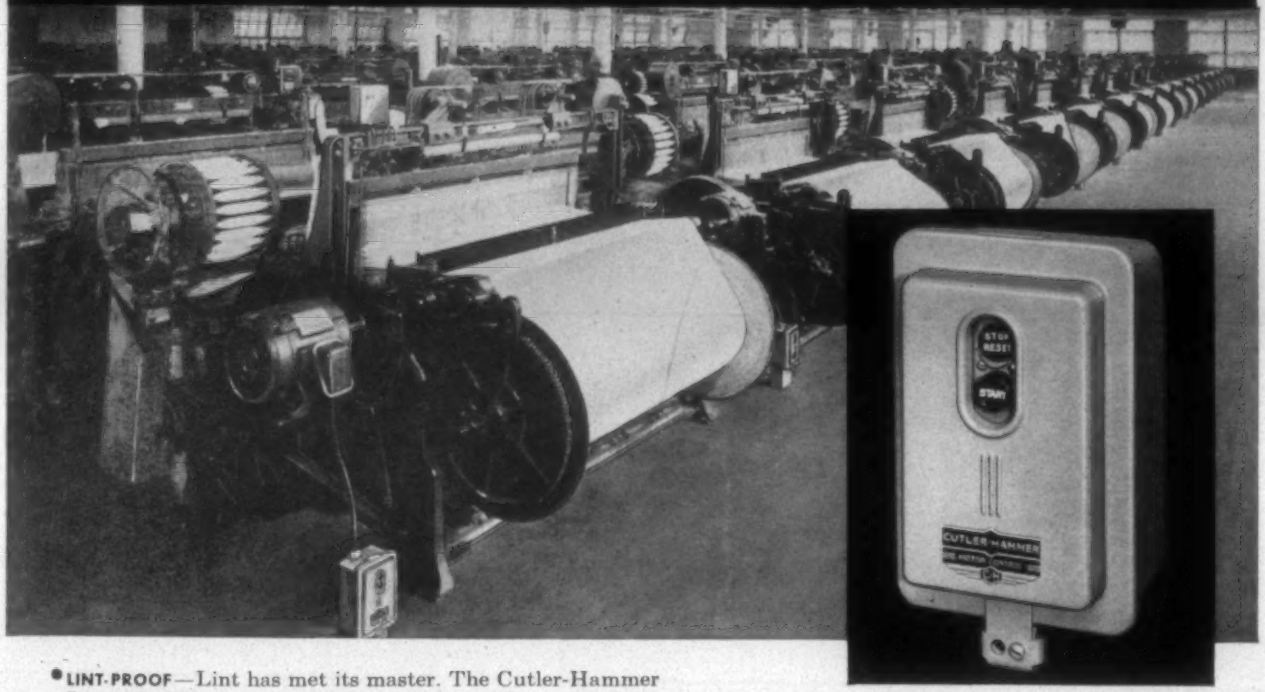
NATIONAL ANILINE DIVISION ALLIED CHEMICAL & DYE CORPORATION

40 Rector St. New York 6, N. Y. • Akron Atlanta Boston Charlotte Chattanooga Chicago Columbus, Ga.
Greensboro Los Angeles New Orleans Philadelphia Portland, Ore. Providence Richmond San Francisco Toronto

NATIONAL ANILINE

Allied Chemical

KEEP YOUR LOOMS WEAVING with the DEPENDABLE CUTLER-HAMMER LOOM SWITCH

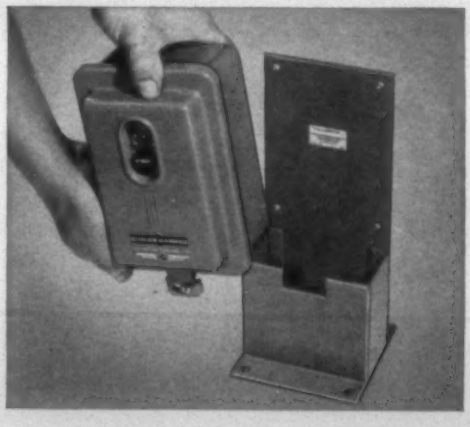


- **LINT-PROOF**—Lint has met its master. The Cutler-Hammer Loom Switch has a triple-gasketed switch cover which clamps securely to the case and is drawn tight with a single captive cover screw.
- **DEPENDABLE OVERLOAD PROTECTION**—Stop costly motor burn-out. The famous Cutler-Hammer eutectic alloy overload relay is free-tripping, tamper-proof and will work the loom motor at top efficiency . . . safely. No nuisance tripping.
- **SHOCK & VIBRATION PROOF**—The Cutler-Hammer Loom Switch is built to take it. The switch mechanism floats on live rubber bushings, sparing the mechanism from impact shocks and machine vibrations. A steel framework supports the all-steel operating mechanism . . . all enclosed in a tough, drawn steel case and cover.
- **EASIER INSTALLATION & INSPECTION**—Loosening a single captive cover screw separates the cover from the case for complete wiring freedom. All terminals are out-front where you can get at them, and are clearly marked for rapid identification and positive wiring. Heater coils are easily inserted and marked for accurate selection.
- **RESISTS CORROSION**—The Cutler-Hammer Loom Switch uses plated steel members and springs of stainless steel to resist corrosion. The case and cover are bonderized, assuring a life-time of rust resistance even in the high temperature and humidity of the weave room.

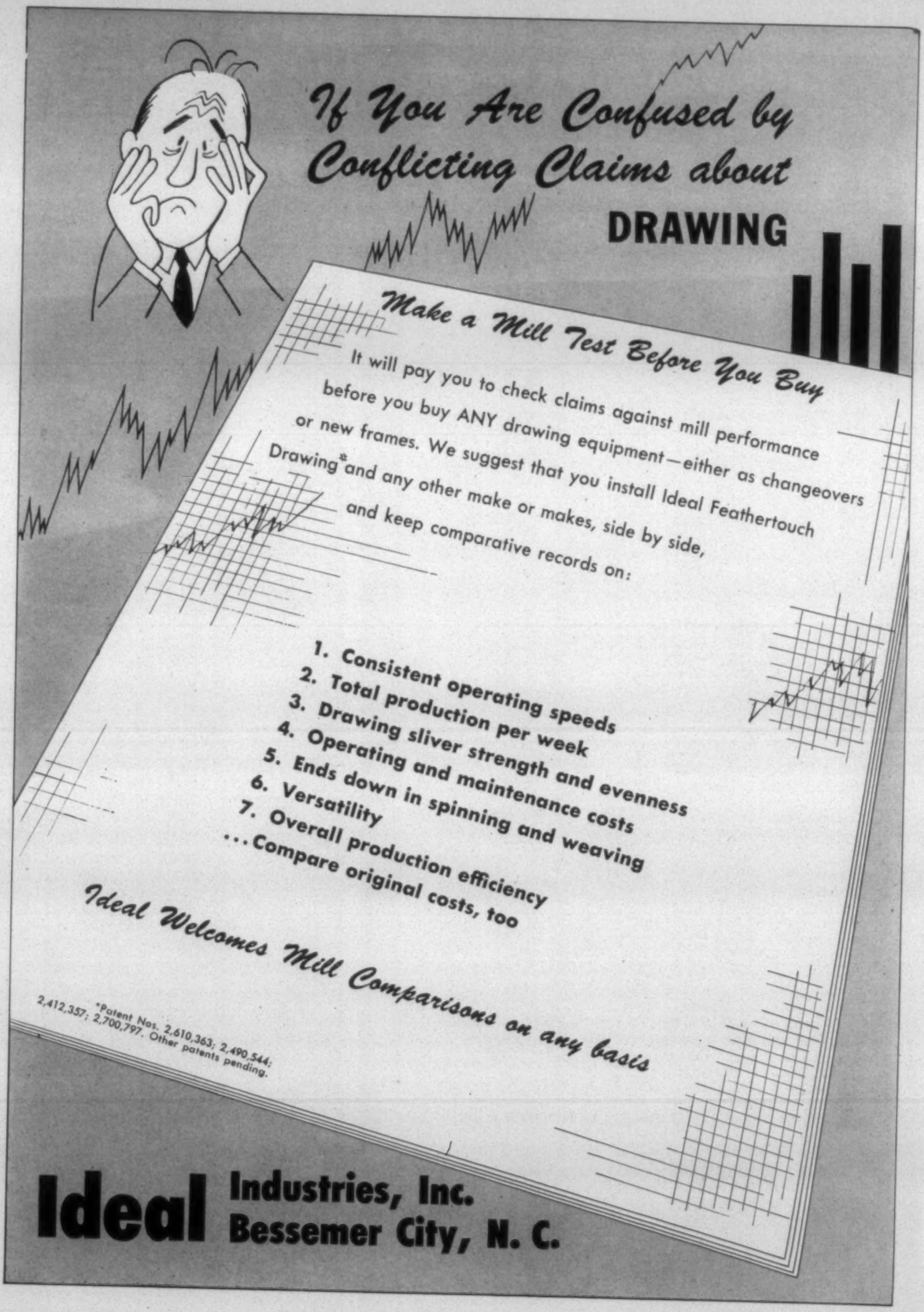
For complete information see your authorized Cutler-Hammer Distributor or write on your company letterhead for Pub. EL-115, Cutler-Hammer Motor Control for Textile Machines. CUTLER-HAMMER, Inc., 1455 St. Paul Avenue, Milwaukee 1, Wisconsin.

CUTLER-HAMMER
MOTOR CONTROL
C-H

- **LINT-PROOF**
- **DEPENDABLE OVERLOAD PROTECTION**
- **SHOCK & VIBRATION PROOF**
- **EASIER INSTALLATION & INSPECTION**
- **RESISTS CORROSION**
- **HIGH-BACK STEEL PEDESTAL**



- **HIGH-BACK STEEL PEDESTAL**—This high-back, steel pedestal provides a solid foundation for floor mounted loom switch . . . it supports the switch from top to bottom, not just at the bottom. Being made of steel (not cast iron) it won't crack off when accidentally struck by a warp truck or kicked.



If You Are Confused by Conflicting Claims about DRAWING

Make a Mill Test Before You Buy

It will pay you to check claims against mill performance before you buy ANY drawing equipment—either as changeovers or new frames. We suggest that you install Ideal Feathertouch Drawing* and any other make or makes, side by side, and keep comparative records on:

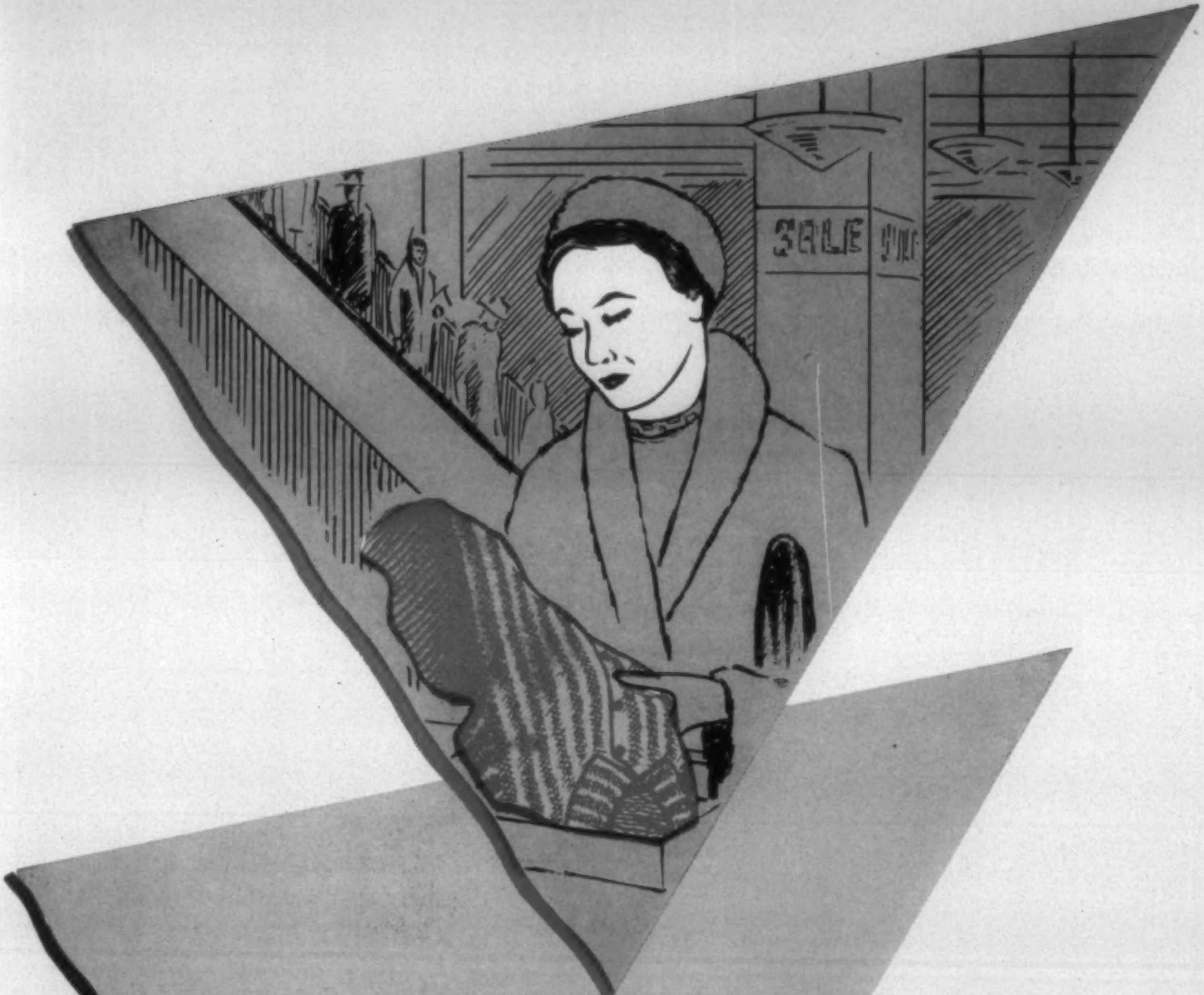
1. **Consistent operating speeds**
2. **Total production per week**
3. **Drawing sliver strength and evenness**
4. **Operating and maintenance costs**
5. **Ends down in spinning and weaving**
6. **Versatility**
7. **Overall production efficiency**

...Compare original costs, too

Ideal Welcomes Mill Comparisons on any basis

*Patent Nos. 2,610,363; 2,490,544; 2,412,357; 2,700,797. Other patents pending.

Ideal **Industries, Inc.**
Bessemer City, N. C.



the customer knows about softeners

Until she tries this garment on, she won't know how it fits . . . until she washes it, she won't know whether it will fade or shrink . . . but the minute she *feels* it, she detects immediately whether it has that soft, lofty hand she is looking for. The best way to avoid disappointing her is to insist that Hart softeners be used in your finishing processes.

SYNTHO-SOFTENERS — Non-yellowing substantive softeners for cellulosic and synthetic fibers. Does an excellent job with resin finishes.

SORBITEX — Anionic, completely non-yellowing softener for cotton, woven and knit goods, and cotton napping.

CATYLEX — Cationic, substantive softener for synthetics.

FINISH WS — Nonionic softener and lubricant, especially recommended for napping and scrooping of nylon.

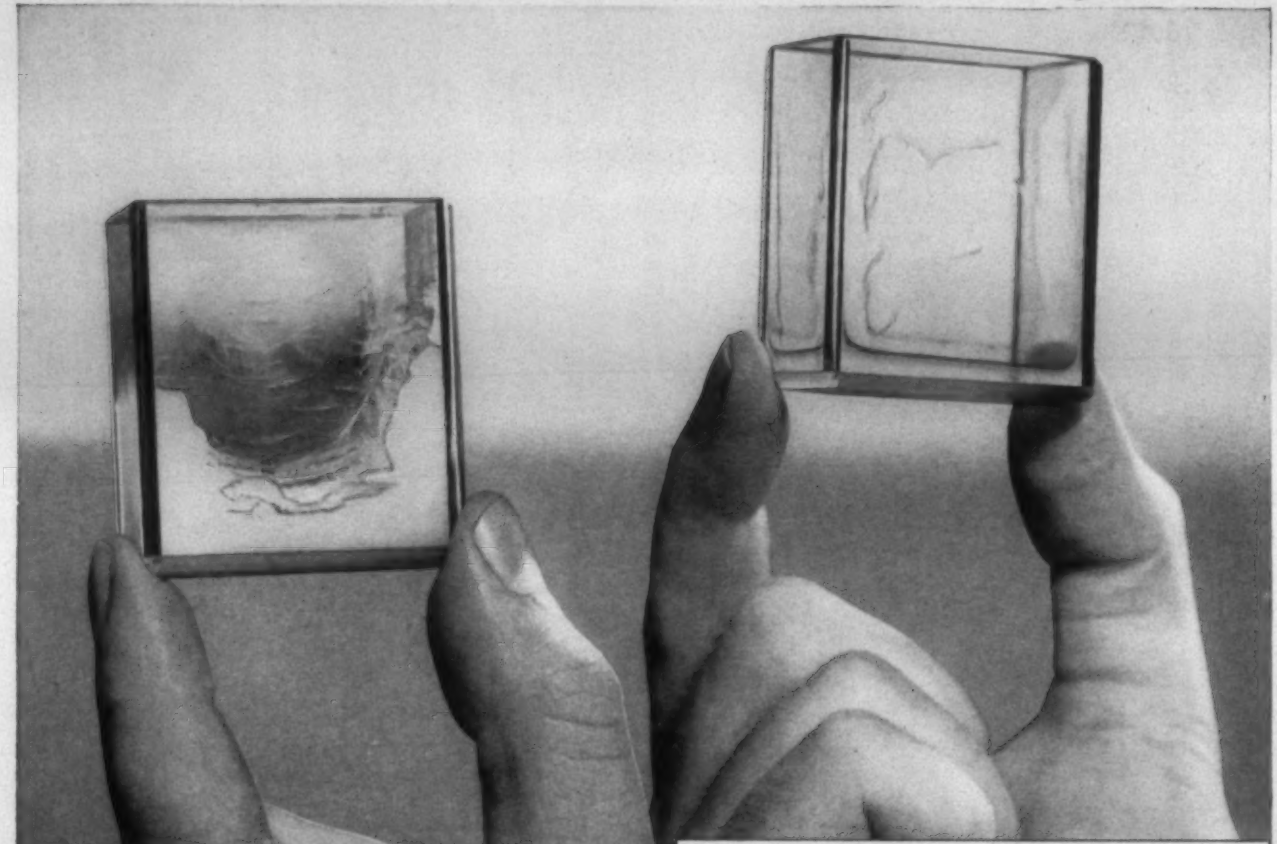
Technical bulletins and complete information will be gladly sent on request.

the Hart Products Corporation

1440 BROADWAY, NEW YORK 18, N. Y.

Works and Laboratories, Jersey City, N. J.
Hart Products Company of Canada, Ltd., Guelph, Ontario

C.P. Starches...Try 'em for Size



Lack of build-up of Ten-O-Film starch in size box is demonstrated by these chemical test boxes containing (left) ordinary starch and (right) Ten-O-Film respectively.

C. P. Starches . . . Try 'em for Size!

	GLOBE							
	Pearl	Gums	Dextrines	EAGLE	TEN-O-FILM	HERCULES	FLEXIBLE	FOXHEAD
WARP SIZING								
General	•			•				
Synthetics	•	•		•	•	•	•	
Worsteds					•			
Carded Cotton	•							
Combed Cotton				•				
Dyed Yarns					•			
Top Beam Yarns					•			
Denims					•			
FINISHING								
Re-starching	•		•	•	•	•	•	•
Printing	•				•			
Back-filling	•							

Solving Tough Slashing and Finishing Problems

TEN-O-FILM®

Starches

If you're not already using TEN-O-FILM Starches, it will pay you to investigate the many advantages offered by this new line:

Ready for use 30 minutes after reaching boil . . . needs less softener or plasticizing compound . . . size remains stable at slashing temperatures despite prolonged heating and circulating—does not congeal or "skin over" at below-normal temperatures—can be held for reasonable shutdown period without gelation. Film strength, continuity and flexibility promote maximum production, permit lower weave room humidity!

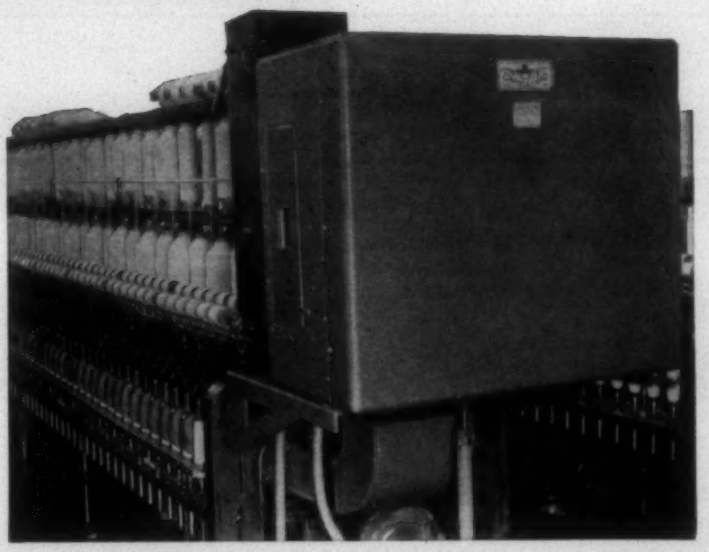
Technical help in utilizing TEN-O-FILM Starches is available without cost or obligation. Ask also about engineering service. Contact your nearest sales office or write direct to:

CORN PRODUCTS SALES COMPANY
17 Battery Place, New York 4, N. Y.

Corn Products makes these famous starches for the Textile Industry:
EAGLE® · FOXHEAD® · GLOBE® · HERCULES · TEN-O-FILM® · GLOBE® Dextrines

SpinSaVac® for better spinning

NEAT
POWERFUL
EFFICIENT



Clearing Conduit

- Pear shape makes piecing easy
- Strong, smooth, anti-static
- Conveniently mounted

Unit Collection Cabinet

- Ample volume
- Flush surfaces
- Rounded edges and corners
- Lint easily removed
- Exhaust air diffused

Vacuum Impeller

- Efficient airfoil design
- Higher vacuum

Further details plus an interesting analysis of heat and humidity conditions with SpinSaVac Unit, SpinSaVac Central and SpinSaVac Material Recovery Systems may be found in our bulletin F55.

Parks-Cramer Company

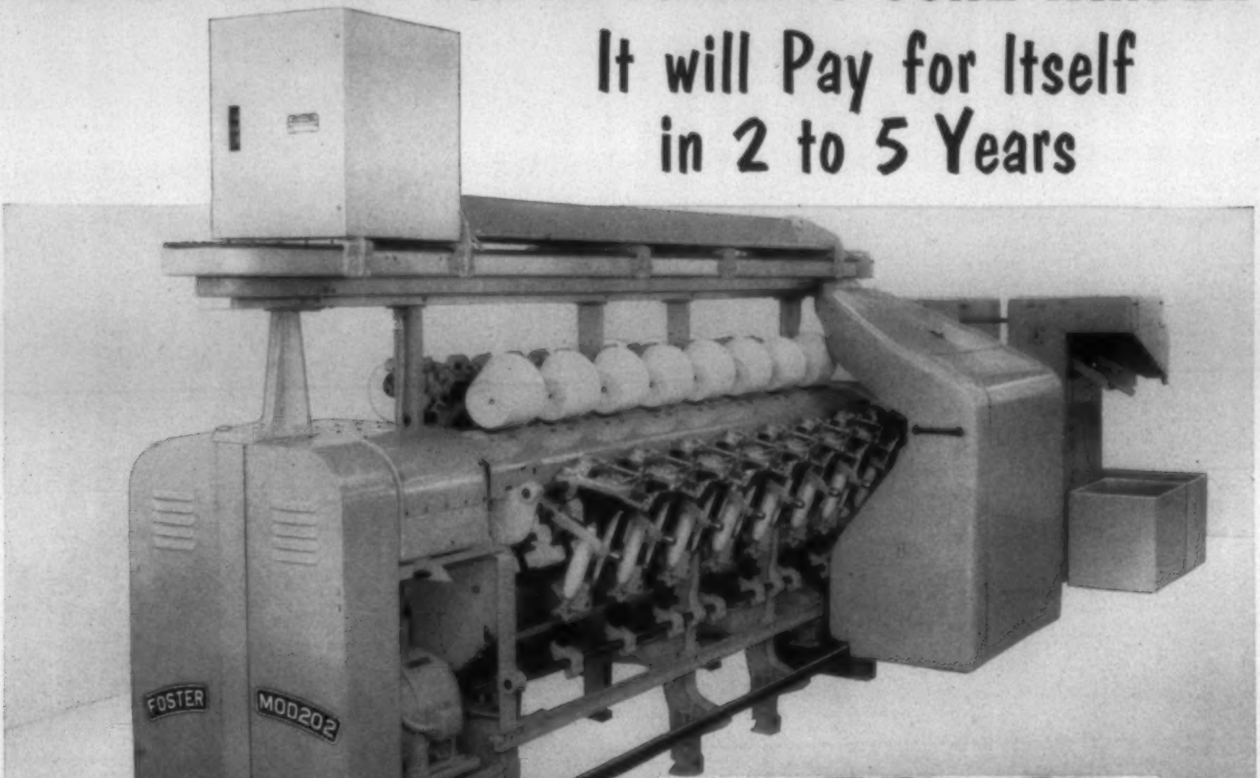
FITCHBURG, MASS. CHARLOTTE, N. C. ATLANTA, GA.

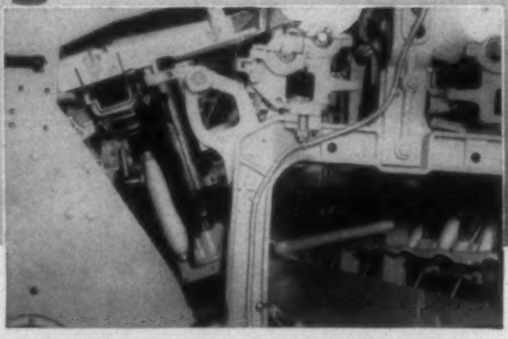
ESTABLISHED 1901

406

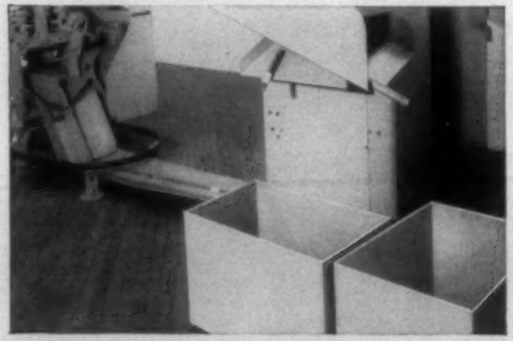
FOSTER MODEL 202 AUTOMATIC CONE WINDER

It will Pay for Itself in 2 to 5 Years





Looking into Automatic Tender where end from cone is sucked into Aspirator. Note empty bobbin is automatically doffed onto conveyor, while full bobbin moves into place.



Showing automatic sorting of empty bobbins into one box and partially filled bobbins into another box.

HERE'S HOW:

It automatically ties 2 or 3 times as many knots per minute as an operator can by hand.

It produces about twice as much poundage per hour per operator as a non-automatic machine.

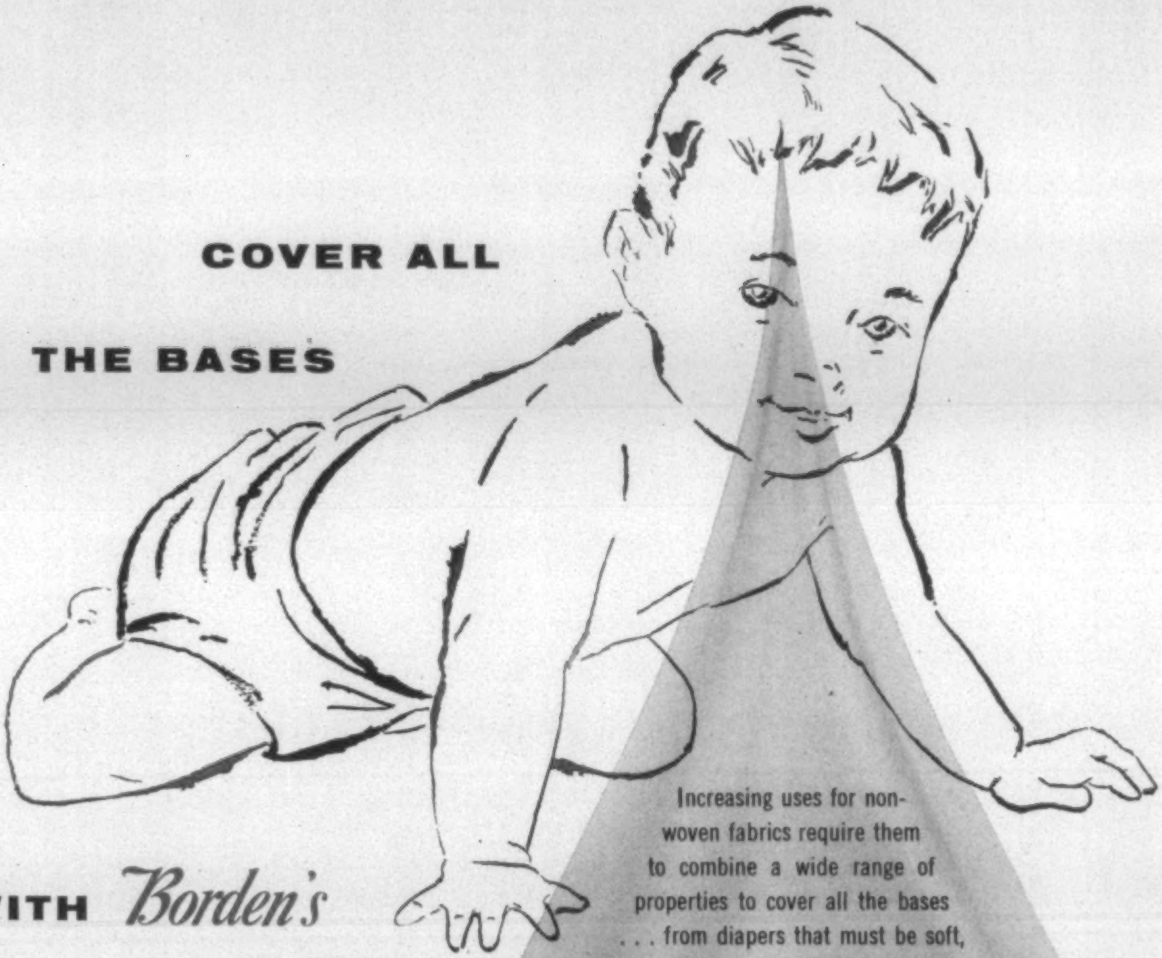
It reduces operating costs by about 50%, as compared with a non-automatic machine.

On fine counts or with large bobbins an operator can handle two machines.

Write for Bulletin No. A-100.

FOSTER
MACHINE COMPANY
Westfield, Massachusetts, U. S. A.

Southern office — Johnston Bldg., Charlotte, N. C. *Canadian Representative* — Ross Whitehead & Co., Ltd., 1475 Mountain St., Montreal, Que. and 100 Dixie Plaza, Port Credit, Ont. *European Representative* — Muschamp Textile Machinery Ltd., Keb Lane Bardsley, Oldham, England



COVER ALL THE BASES

WITH *Borden's* VERSATILE NON-WOVEN FABRIC POLYMERS

Increasing uses for non-woven fabrics require them to combine a wide range of properties to cover all the bases . . . from diapers that must be soft, strong, elastic and dispersible in water . . . to fibered glass mat binders that show high binding power and specific adhesion to glass. You can get this vital versatility with the right Borden polymer that is custom-tailored to the job. More examples: Borden's polyvinyl acetates impart strength and water dispersibility to disposable mops; automobile upholstery backing can be given heat-sealing ability, high tensile strength and rigidity with a Borden vinylchloride copolymer. To cover the widest range of non-woven fabrics and increase your sales potential, investigate Borden's complete textile polymer service. The Borden Company, Chemical Division, Polyco-Monomer Dept. TB-67, 350 Madison Avenue, New York 17, N. Y. In Canada: Polyresins, Ltd., 184 Laird Drive, Toronto 17 (Leaside), Ontario.

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IF IT'S A *Borden* *Chemical* IT'S GOT TO BE GOOD!

PICTURE OF STRENGTH...

Original Denman PIONEER LOOM PARTS

PROTECT expensive loom parts!
ABSORB high-speed loom shocks!
INCREASE loom efficiency!
LONGER "prime of life"!

Original Denman Pioneer Loom Parts are engineered and moulded for one purpose only . . . to give greater efficiency, longer life, smoother performance in all your loom operations. All are compounded of only the very finest materials to withstand wear, produce the exact amount of resilience necessary to absorb shock and vibration with minimum wear and tear on the loom. To cut costs, increase production, protect expensive looms . . . SPECIFY ORIGINAL DENMAN PIONEER LOOM PARTS!

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JOHN D. NORMAN, P.O. Box 445, West Point, Ga.

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THE KARL H. INDERFURTH CO., INC. (*Exclusive Selling Agent and Warehouse*)
P.O. Box 6161, Charlotte, N.C.

TEXPLANT CORPORATION, 695 Summer Street, Stamford, Conn.

ALBERT R. BREEN 80 E. Jackson Blvd., Chicago 4, Ill.

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Other Representatives Throughout the World . . . Or Write

DENMAN TEXTILE RUBBER COMPANY

2828 Second Street • Cuyahoga Falls, Ohio

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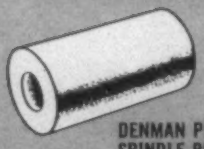
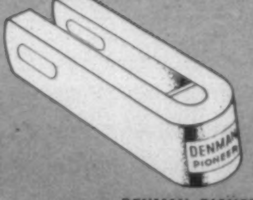
DENMAN PIONEER HOLD-UP STRAPS

DENMAN PIONEER SWEEPSTICK


DENMAN PIONEER SPINDLE ROD BUMPER

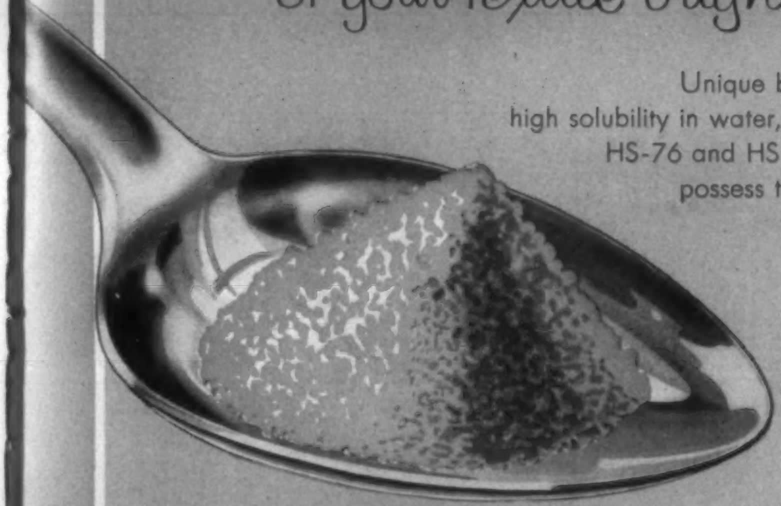

DENMAN PIONEER LUG STRAP

DENMAN PIONEER BOBBIN STRIPPER BLADE

DENMAN PIONEER DOLL PICKER

BLANCOPHOR HS BRANDS

for the "Easy Solution" of your textile brightening problems...

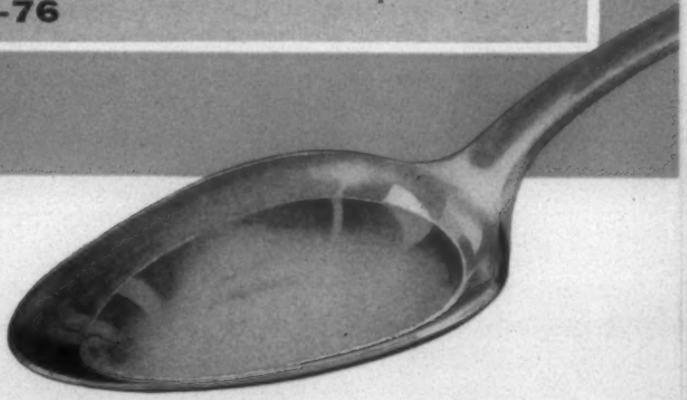


Unique because of their exceptionally high solubility in water, BLANCOPHOR HS-71, HS-76 and HS-31 optical whitening agents possess these quality features:

- ✶ Recommended for pad or mangle application on cotton and rayon fabrics.
- ✶ Work well alone or together with usual finishing ingredients—resins, starches, fillers, softeners, etc.
- ✶ Produce clear, brilliant whites on bleached textiles.
- ✶ Outstanding in their level dyeing properties.
- ✶ Suitable for use in all types of equipment, such as jigs, reel or package machine.

THE POWDER FORM

BLANCOPHOR HS-71 and HS-76



THE NEW LIQUID FORM

BLANCOPHOR HS-31

BLANCOPHOR HS-31, the new liquid form, is easy to use—there's no need to dissolve powders.

Write today for more detailed information on the application of liquid form Blancophor HS-31 and powder forms, Blancophor HS-71 and HS-76.

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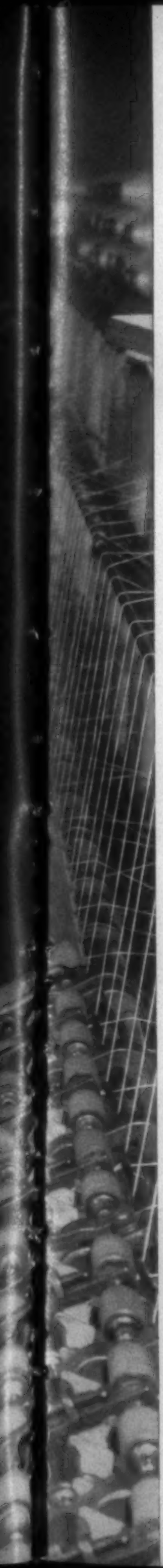
Blancophor HS-71, HS-76 and HS-31 manufactured by General Aniline & Film Corporation are sold outside the United States under the trade names, respectively, Tintofen DP, Tintofen D and Tintofen DP Liquid.



Excessive eyebrowing?
Too many lap-ups?
Yarn irregularities?

The broad line of Accotex® roll covers will help you solve these problems

When you have a problem involving such things as front-roll laps, excessive eyebrowing, or yarn irregularities, it's a good idea to talk things over with your Armstrong representative. His practical training and experience can be a helpful source of ideas and information.

Whatever the difficulty, chances are he can recommend a material from the broad line of Armstrong roll coverings that will meet your specific needs.

For example, where lapping is encountered, the Accotex J-490 Cot is first choice in hundreds of mills. The J-490 compound contains a special electrolyte that actually tends to repel loose fibers.

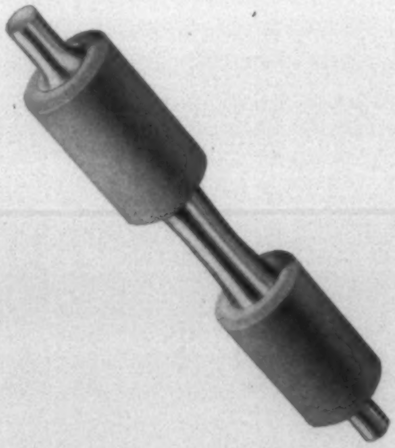
Where high static conditions aggravate lapping, one of the new Armstrong anti-static materials will probably offer a solution. These new materials are made especially to combat high static on modern high-draft frames where nonmetallic cap bars are used and where other metal-to-metal contacts have been eliminated.

There has been a trend toward softer cots as a means of reducing irregularities on certain types of yarn. The softer materials offer better yarn control. Armstrong can supply the soft cots where their use is indicated.

Where eyebrowing is a problem, the Accotex NC-762 Cot—one of the new anti-static materials—will control it. Many mills report substantial reductions in the amount of waste where NC-762 is used. And the waste that does form is packed well back under the clearers.

No matter what type of fiber or blend you're spinning . . . no matter what equipment you're using, there's an Accotex Roll Covering made to help you turn out strong, uniform yarn. Your Armstrong man can help you choose the right roll cover for best performance in your spinning room. Call him today. All Armstrong textile products are available for export.

For more information about Accotex Roll Coverings or other Armstrong textile items, write for the booklet, "Armstrong Textile Products." It gives suggestions on selection, installation, and maintenance of Armstrong spinning room and weave room supplies. Address Armstrong Cork Company, 6506 Davis Ave., Lancaster, Pa.

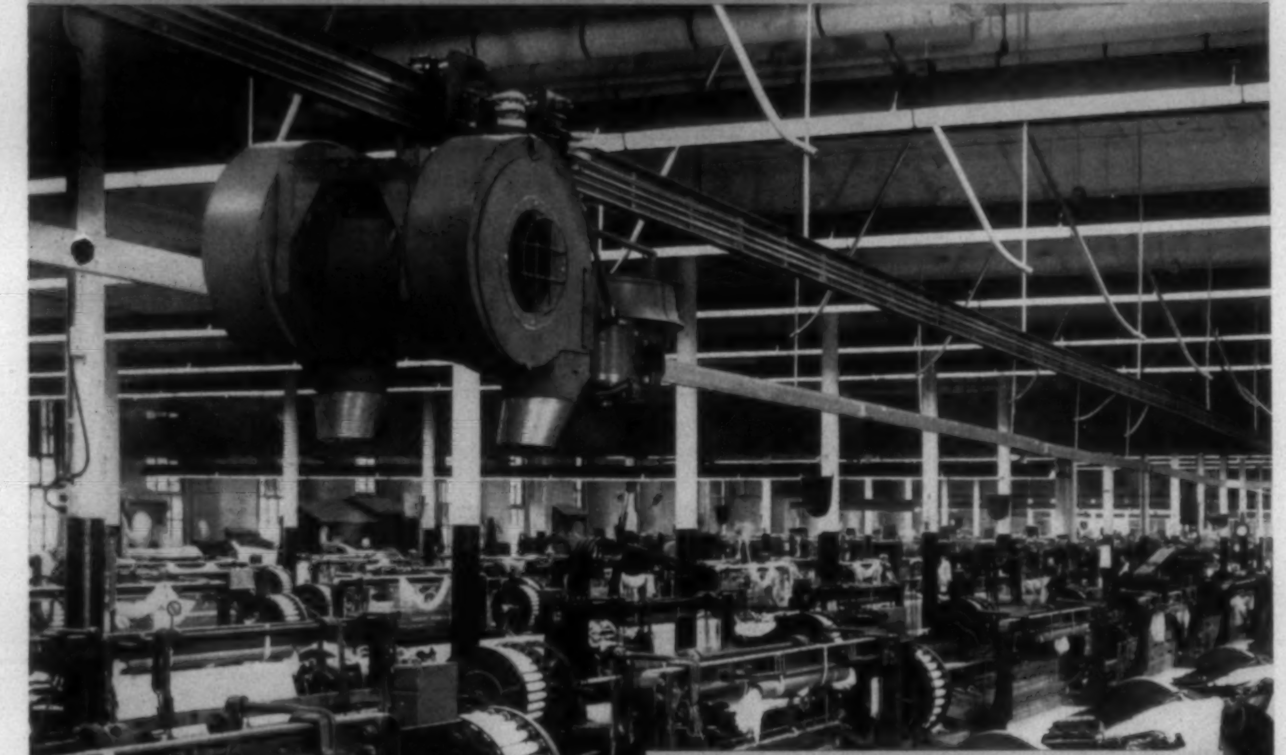


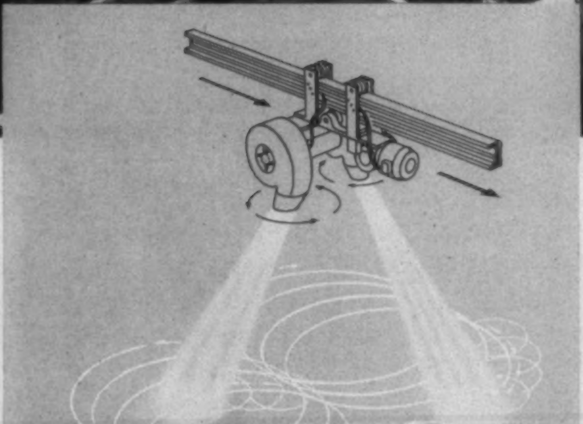
Armstrong ACCOTEX COTS

. . . used wherever performance counts

Amco Introduces it's New

Heliclone Loom Cleaner





Swiftly whirling outlet nozzles, driven by the air stream, direct the air jets at an acute angle in overlapping, circular paths. The result is a rapid series of high-velocity bursts of air over loom and warp surfaces for complete cleaning action.

Provides automatic, continuous cleaning of looms and ceiling · Drastically cuts cleaning costs · Steps up production · Improves quality of fabric · Reduces fire hazard · Improves weave room appearance · Boosts employee morale · Can be incorporated with beam handling equipment.

Write for further information, or ask to have an Amco engineer call.

AMERICAN MOISTENING COMPANY *Air Conditioning Systems and Textile Mill Equipment*

Executive Offices: Cleveland, N. C. Branches in Atlanta, Boston, Camden, Providence, Toronto

IMPLOSION

Converts Size Finer, Faster in a Gaulin Homogenizer

Converting size by mechanical means rather than thermal is the modern way to make a better, more uniform size at lower cost. Hundreds of progressive mills have proved it to their complete satisfaction.

A Gaulin Homogenizer converts size particles under tremendous speed and pressure. Makes them more uniform and stable.

And that's where the savings begin. First, you get closer viscosity control. You use less starch, steam and supervision. Less hard size. And can store your size as long as 48 hours.

But just as important, Gaulin-Homogenized Size penetrates yarn better, more uniformly — makes a marked improvement in the quality of your warp yarn.

Experience proves that most Gaulins pay for themselves in from 6 to 18 months. We'll be glad to install a Gaulin Homogenizer for you on a guaranteed performance basis. Whether you're making cottons, worsteds or synthetics, write for more information.

MANTON-GAULIN MFG. CO., INC.
66 Garden Street, Everett 49, Mass.
Southern Representative:
W. A. Hewitt, P. O. Box 961, Greenville, S. C.

Here are some of America's Leading Mills Using Gaulin Homogenizers

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- CONE MILLS
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- EXPOSITION COTTON MILLS
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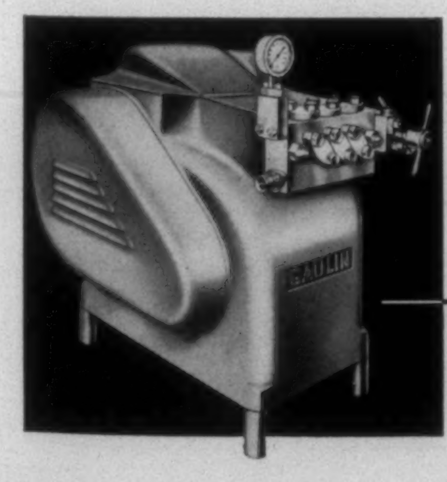

Gaulin HOMOGENIZERS

Gaulin TRADE MARK

WORLD'S LARGEST MANUFACTURER OF HOMOGENIZERS,
TRIPLEX STAINLESS-STEEL HIGH PRESSURE PUMPS,
AND COLLOID MILLS

when Acrilan® quality is being checked . . .

WE ALWAYS CALL THE CLOSE ONES YOUR WAY!

Two teams have direct responsibility for making Acrilan. Plus an umpire.

One team, the Technical Department, writes the specifications for the product. (And they demand the closest tolerances, the most exacting standards in the industry.)

The other team, Manufacturing, provides the facilities for producing Acrilan acrylic fiber according to these specifications.

The umpire is Quality Control.

Like the man in blue on the ball field, Quality Control calls the plays. *Unlike* the man in blue, *this* umpire is frankly biased. In your favor.

He calls all the close ones your way. Let there be a hairline deviation from the prescribed standards at any stage of production . . . and Quality Control gives the batch in question the well-known thumb. In other words, like all umpires, Quality Control has the last word.

As a result, Acrilan quality has now reached a level of top-grade uniformity once thought unattainable in the newer man-made fibers.

In *your* mill . . . thanks largely to this vigilant umpiring by Quality Control . . . Acrilan offers the following significant contributions to efficient, economical operation:

- STAPLE-LENGTH UNIFORMITY *superior to the most critical needs in the textile field.*
- FLY REDUCTION *so significant it is raising yarn quality, reducing mill costs and waste.*
- UNIFORM DYEABILITY . . . *dye merges maintained without change for over two years now.*
- FAR BETTER FINISH CONTROL . . . *with the direct effect of improved carding and spinning uniformity.*
- IMPROVED HIGH BULK PROCESSING . . . *for greater assurance of fabric shrinkage control.*

In the light of such advances, there can be no arguing with the umpire. His calls in your behalf have gained for Acrilan over the past two years the record of being the top-spinning, smoothest-running fiber in mill after mill throughout the country.

ACRILAN ACRILAN ®

THE CHEMSTRAND CORPORATION • GENERAL SALES OFFICES: 350 FIFTH AVE., NEW YORK 1, N. Y. • DISTRICT SALES OFFICES: 3½ Overwood Road, Akron, Ohio; 4 Pearl Street, Dedham, Mass.; 222 South Church Street, Charlotte, N. C. • PLANTS: ACRILAN® ACRYLIC FIBER—Decatur, Ala.; CHEMSTRAND® NYLON—Pensacola, Fla.

BARRELL
TEXTILE REPRESENTATION
FROM COAST TO COAST

We match

INVESTMENTS

with our clients. They contribute the production skills of an independent mill organization. We contribute the know-how and experience of over 50 years of specialization in the merchandising of fabrics on a nationwide basis. The dividends: national market coverage plus steady sales growth, year after year.

WILLIAM L.

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The above photograph shows a recent installation of the Gossett economy change-over, equipped with Gossett's big new coilers with anti-friction bearings. Size of coiler shown is 16" x 36".

HERE IT IS!

Gossett's BIG Coiler

Gossett Machine Works pioneered the big coiler conversion technique. Now Gossett master technicians have developed a big new coiler . . . bigger and better than ever.

The Gossett Machine Works has been serving textile mills for more than a quarter of a century. So it is not surprising that Gossett technicians have developed a practical, sure way to greatly increase the amount of sliver per can . . . . . and do it at a moderate cost. In fact, more than 100 Southern mills have already installed a complete Gossett coiler conversion. Upon written request, we will be glad to give you the names of these mills.

WHAT WE DO WITH COILERS

1. **We convert 10" and 12" card coilers to 14" through 18" in diameter and 36" to 42" in height.**
2. **We convert either single or double-head 10" and 12" comber coilers to 14" and 15" in diameter and 36" to 42" in height.**
3. **We manufacture parts for all sizes and makes of coilers.**
4. **We manufacture completely new coilers to meet your specifications . . . . all heights and sizes. Choice of sleeve or anti-friction bearings.**

Get Cost of the Gossett Economy Package on Conversion

We will be glad to give you the cost of a change-over, using our economy package plan which

1. **Saves your present pedestal.**
2. **Allows for all new parts applied to the pedestal . . . . plain or anti-friction bearings.**
3. **Assures you of all machine finished gears.**

B. W. GOSSETT
President

E. C. MASON
Sales Manager

D. W. SMITH
N. C.-Va. Representative

GOSSETT Machine Works, Inc.
GASTONIA, NORTH CAROLINA

WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

The President is employing almost the last ounce of his personal popularity to try to check the budget-cutting frenzy spreading in Congress. In his appeals to the country he is emphasizing those things which he knows the country does not want cut, especially money for essential national security. But that is not the concern of bureaucrats who are trying to push the country into the biggest wave of peace-time spending next year it has ever known. They are trying to save their tight little pockets of personal power, which, added together, mean five to ten billion dollars in budget levels.

Appeals to Congress for money never reveal the boondoggles hidden behind the proposed spending, for concealment is adroit. But Congress is uncovering them, sometimes with a meat axe, and even the President's personal popularity is not saving them. Substantial cuts are being made, with no indication that any have been made which should not have been. It is not an easy task, for minority spending groups are vociferous and are well organized, while tax payers are not well organized.

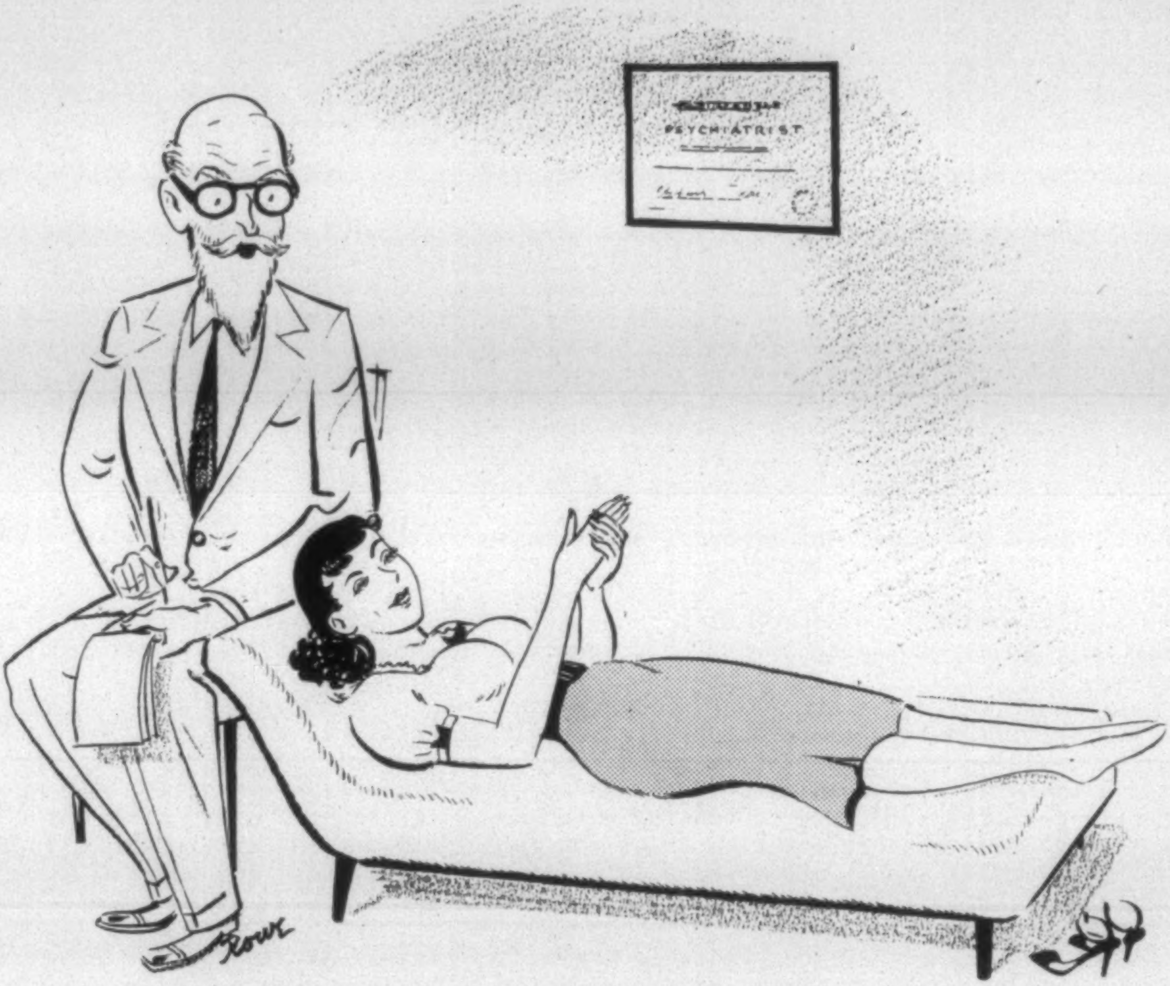
Senate Majority Leader Johnson warned the President and his Administration to let Congress alone and not attempt to dictate on budget cutting. He said Congress may not be too efficient, but it will not sanction being told what to do by outsiders. He demanded that the Administration come across with facts that will enable Congress to understand the spending proposals, and allow intelligent action within what the government can afford to spend.

The new housing bill adopted by the House, however, calling for $1,625 million, does make the economy drive look sick. It wiped out savings made in earlier appropriations, for the House by dint of noise, sweat and tears, had slashed $1,141 million from eight spending bills. A substitute housing proposal was thrown in by Mr. Edmonson (D., Okla.), and the House went for it in a big way. The country needs housing, the members said, and cuts will be made in other places.

Stereotyped cliches of "social progress" and "winning the cold war with foreign aid" are being used by pressure groups to try to check the wave of economy. The country cannot survive without both, Congress is told, and a new fantastic extravaganza in spending is urged. But from the home districts the loudest protests are over failure to reduce the national debt and against continued indiscriminate foreign aid. The average letter writer does not go into details, because he does not understand them, but he does know how to demand a tax cut.

This country is going broke, and committing economic suicide through its foreign aid programs, veteran diplomat Spruille Braden told the House Foreign Affairs Committee. Instead of spectacular results for the $60 billion spent, he said, "we have to admit that never did we give away so much for so little." He said the program has failed to produce security and not create enemies. He said it has been backed generally by "misguided idealists and sentimentalists, abetted by thousands of bureaucrats in lush jobs."

The current "economy drive" will produce benefits even if it utterly fails in this Congress, declared Senator Byrd, (D., Va.). Other sessions of Congress



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Dillard PAPER COMPANY

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1926 "IF IT'S PAPER" 1957

have already provided the President with a large backlog of funds on which he can draw if he chooses to carry out his $72 billion spending program. But the net result, the Virginia senator believes, will be more economy in next year's budget than has been seen in more than ten years. "We may lose the battle this year, but we will not lose the war next year," said the Virginian.

What will probably be the world's most costly and ornate office building is proposed on two blocks west of the White House. The estimated cost is $32 million. It will house the President's growing staff, and also the flock of boards and commissions attached to the White House. The present State, War and Navy building, an ornate 80-year-old landmark, would be demolished, and two marble structures would be reared on adjoining blocks, west and northwest of the White House, all connected by tunnels. Present offices of the White House would be converted into guest quarters for foreign visitors.

The Supreme Court has reversed the conviction of another Communist, Clifton Jencks, charged with filing false non-Communist labor affidavits. He was convicted in 1954. The reversal was because the trial judge refused to allow the defense to examine reports of the F.B.I. in the case. This has never been done. Justice Clark, in a sharp dissent, said government intelligence agencies "may as well close up shop," and criminal files are opened up "to a Roman holiday of rummaging through confidential information and vital national secrets."

Members of the Senate Subversive Activities sub-committee called the court's decision the hardest blow yet in behalf of Communist activity. Besides being a victory for Communists, they said the F.B.I. has been seriously, and possibly mortally, crippled in dealing with Communists and all other kinds of criminals. Even a bank robber on trial can demand all records and reports made by any F.B.I. agent who appears as a witness against him, and under this decision, is entitled to get them.

Department of Justice officials are studying the decision for its effect on ten other non-Communist affidavit prosecutions that are pending. The alternative is that the government must drop the prosecutions unless it reveals its confidential information, and sources of such information. The decision was delivered by new Justice Brennan, whose confirmation was vigorously opposed by Senator McCarthy as one of the last acts before his death. How far the decision applies to all criminal cases is yet to be decided.

F.B.I. Chief J. Edgar Hoover has long maintained that the confidential character of his files must be inviolate. Congress has granted increased appropriations each year to enable the F.B.I. to achieve a high degree of efficiency, and the confidential nature of data has never been challenged. The question is also raised whether the Central Intelligence Agency's files are inviolate or, as Russia would most like, opened to inspection and rummaging.

Senator McClellan's Committee is coming to realize that the task of exposing the unions' "gangsterism economy" is far greater than was believed when it started. Unsuspected ramifications are being uncovered which have deep roots among crooked politicians and unscrupulous businessmen. "Deals" have been made through which some plants and industries were not unionized, and crooked unionists have even shared in the profits. Senator McClellan believes that many of the cases are matters for grand jury action.

Senator Kefauver (D., Tenn.) switched his vote in the Senate Judiciary Committee, and defeated a provision to abolish a Civil Rights Commission, similar to F.E.P.C. On a tie vote, as a result of the Kefauver switch, the provision remained in the committee's bill. The commission would be endowed with powers equal to war time to investigate allegations of discrimination in employment, and in other things, because of race, creed, color, national origin and possibly sex.

if you need new pickers—

The Aldrich Single Process Picker is the most modern picker—more anti-friction bearings; more cut gears; more steel gears; more sensitive evener; more chain drives; more valuable improvements than any other picker.

if you have old pickers and they need rebuilding—

Every Aldrich improvement can be put right on your old frames, or some like them that will be furnished in exchange.

if you have old pickers in fairly good condition—

A new Aldrich calender, and a new Aldrich evener will make practically a new picker out of the old one.

AldricH MachinE WorkS

Greenwood, South Carolina

For the Textile Industry's Use

— NEW MACHINERY, EQUIPMENT AND SUPPLIES —

Sandoz Dyestuff

Lumicrease/Cuprofix Grey 3LBN p.a.f. is a new Sandoz direct dye, bluish grey in shade, with the maximum fastness which is required for automotive and decorative fabrics. Good wet fastness can be further improved by aftertreatment with Cuprofix, Sandofix and/or standard U. F. Resin finishing. Lumicrease/Cuprofix Grey 3LBN p.a.f. is stable to hard water. Level dyeing properties of this new color represent a great improvement over existing similar types. It is suitable for application by all conventional methods. Reserve of nylon and acetate is exceptionally good.

(Request Item No. F-1)

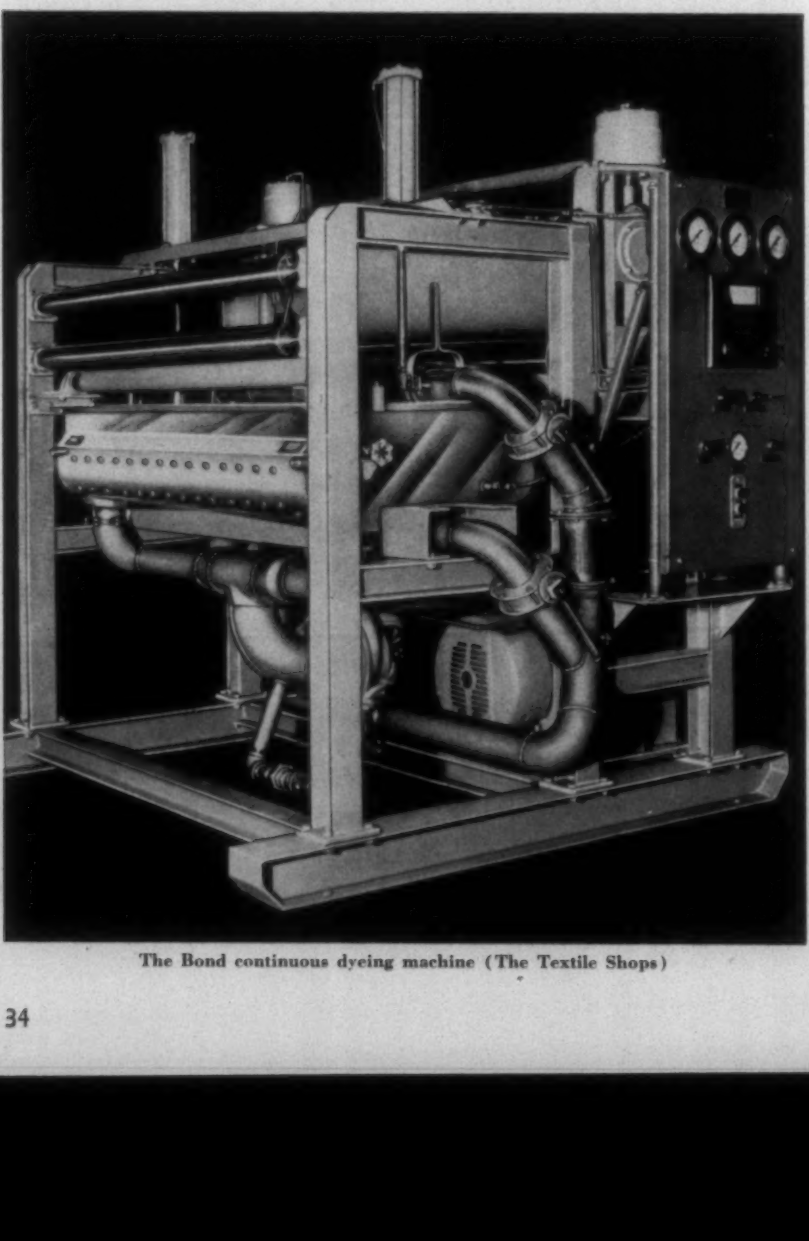
Continuous Dyeing

A new type continuous dyeing machine, known as the Bond continuous dyeing machine, has recently been patented and licensed for building and distribution by The Textile Shops. The dyeing machine is constructed of 3/16" stainless steel and operates practically tensionless. The unit is said to provide flexibility and efficiency in making short runs and simplicity in matching shades. Low volume liquor ratio, uniform temperature control, automatic pneumatic pressure controls and automatic liquor level flow control are features of the new unit. Five of the units constitute the average continuous range with more or fewer units involved according to mill requirements. Two employees are required for the operation of the range which exerts the least possible crushing to pile fabrics.

Processing liquor is forced through the material by means of a circulating pump with equalized pressure on both face and back of the fabric. The pressure and rate of flow forms a baffle as goods pass through in open width. The liquor is supplied to the dye compartment by gravity feed.

The machine is suitable for various fibers and blends and many types of dyes as well as desizing, scouring and fabric preparation prior to dyeing. It may also be used as a saturator in continuous bleaching and mercerizing and for developing and wet finishing of screen prints. Vat colors may be applied by pigment method with or without drying after pigmentation using the new machine.

(Request Item No. F-2)



The Bond continuous dyeing machine (The Textile Shops)

Adjustable Bench

A new modular production bench system, comparable in price to conventional inflexible benches, is made up of telescoping frame members and lift-out work panels. Called Product-A-Flow, its interchangeable members allow changing from one configuration to another in as little a time as 15 minutes. The same parts are used over and over for use in either single or multiple in-line, ladder, console, back-to-back or any combination of these. Product-A-Flow saves the investment in benches and at the same time gives maximum production efficiency for each new use. Working depths are adjustable up to 30" simply by pulling out the telescoping strut to size and locking with the simple fastener. Work station widths are changed merely by sliding the front leg frames to the left or right and locking into position. Legs have height and leveling adjustment.

As optional, interchangeable equipment, each section has provision for integral wiring, lighting and air, water and gas lines. Other accessories include: bench-top package conveyors; equipment storage racks, stationary and mobile, for storing idle equipment away from the production floor and bringing it in as needed; utility shelves; posture chairs; and foot rests.

(Request Item No. F-3)

Resin Emulsion

The development of a new concentrated resin emulsion has been announced by Chemical Products Corp. When used in aqueous solutions with a catalyst on glass or matted glass fibers, the emulsion provides a strongly adhering size which is said to be tough and shatter-proof. The size has non-cracking, non-dusting, non-fraying and non-splintering properties. It binds pigments, colors and fillers to the glass fibers with a strong durable bond. Its paleness permits good light transmission and minimum discoloration.

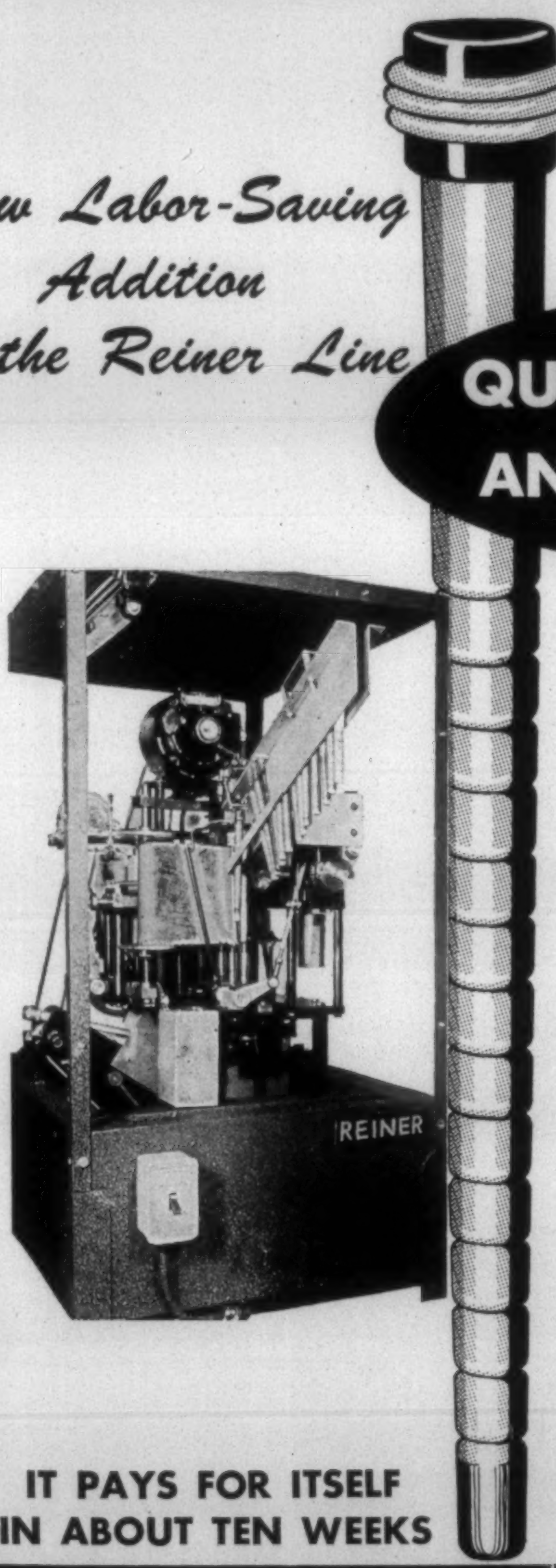
(Request Item No. F-4)

Static Bar

The Simco Co. has announced a new addition to its line of static eliminating equipment. The new static bar, called the Super Service static bar, is square in cross-section and is totally encased. In addition to having

New Labor-Saving Addition to the Reiner Line

QUILL REFINISHER AND DEGREASER



Entirely new in concept—this compact, space-saving (3½ ft. x 2 ft.), precision built Reiner Quill Refinisher can handle 30-35,000 cleaned or polished quills a day—at practically no expense and without any additional labor cost. IT PAYS FOR ITSELF IN ABOUT 10 WEEKS.

Production-tested to run at a capacity of up to 23 quills per minute, the Reiner Refinisher employs a 4-station processing cycle which provides thorough cleaning of quill grooves and gives a highly polished surface without the use of harsh abrasives. Quills last longer, and there is a material reduction in broken or tight picks, split or fuzzy filling which means more profitable, uninterrupted loom production.

Designed to be fed directly from Terrell Stripping Machines (Models L or K) The Reiner Quill Refinisher requires no operator—thus providing a substantial saving in labor cost. Quills feed directly from the stripping machine to the Refinisher, are processed and then ejected by a small conveyor. The materials used by this machine last approximately 20 hours before being replaced.

The machine's 4-cycle standard operation provides for cleaning at the first two stations and waxing and buffing at the third and fourth. However, its extreme versatility provides for any required combination of 4 separate and distinct operations, i.e., straight cleaning to remove grease, or cleaning and waxing, etc. The Reiner Refinisher permits the polishing of sections of quills—such as tips, shanks, ferrules or any combinations wanted.

Constructed from the finest materials, with a sealed motor, the Reiner Refinisher will give many years of trouble-free service.

Adjustments and conversions from one operation to another can be readily and speedily made by a quill fixer.

THIS MACHINE CAN BE SEEN IN OPERATION AT THE REINER DEMONSTRATION ROOM IN WEEHAWKEN, NEW JERSEY.

IT PAYS FOR ITSELF IN ABOUT TEN WEEKS

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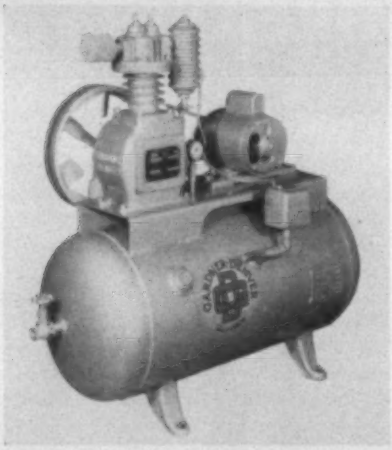
maximum neutralizing efficiency, it has been designed to require no maintenance other than an occasional brushing or blowing off of the points. Because of its construction, nothing can fall inside the bar to short circuit it internally, thus making it especially adaptable to use in dirty locations.

The Super Service bar is made in 2 cross-sectional sizes, ⅝" square in short and medium lengths up to 60" and 1¼" square in spans up to 12 feet.
(Request Item No. F-5)

Small Compressor



Model CACB air-cooled compressor (Gardner-Denver Co.)

According to a recent release from Gardner-Denver Co. a small compressor that supplies oil-free air is now available. The new unit, known as the Gardner-Denver CACB model, is designed to provide oil-free air for the operation of instrument controls. The heart of this space-saving compressor is said to be in the carbon parts in the cylinder which require no oil or water lubrication. The CACB is a single-stage, air-cooled unit which is available base or tank mounted. It supplies air at the rate of 4 to 5 c.f.m. and is suitable for discharge pressures of 40 to 100 p.s.i. Automatic start and stop controls are supplied as needed. (Request Item No. F-6)

Platform Truck

The new Freighter platform truck recently announced by Hyster Co. is designed to transport loads of up to 4,000 lbs. safely and rapidly through confined aisles and crowded areas of terminals and warehouses. It is powered by Wisconsin's industrial Model AEN engine and has fully automatic drive which results in smooth power flow and excellent inching qualities for precise load positioning. The air-cooled engine provides 8.1 h.p. at 3,000 r.p.m. for ample power to negotiate ramps up to 10% with full load. The Freighter can be operated at speeds up to 10 m.p.h. and is reported to be economical in operation.

Simplified driving controls make the Freighter easy to operate. The throttle ring is mounted within the steering wheel and the hand operated brake control bar is forward of the operator and below the steering wheel. Steering ratios of either 1 to 1 or 3 to 1 are offered. The centrifugal clutch plus automatic transmission with an infinite series of ratios provides a smooth power flow under all conditions. The Freighter has an over-all length of 105½" with bed size of 60" long x 42" wide which has ⅜" slope to center to assist in keeping load from shifting. Maneuverability is accomplished by 360° steering, making it possible to operate in a 71" 90° intersecting aisle. Electric starting system, engine hour meter and comfortable padded operator support are included as standard equipment along with many other new design features.
(Request Item No. F-7)

Gear Pump

A new sealed gear pump which measures only 2½" in diameter has been developed by engineers of Bijur Lubricating Corp. Featuring a special seal, this uni-directional pump can be mounted on any machine requiring fluid circulation for lubrication or other purposes. Designed to be driven from a rotating machine shaft either directly or through a gear or chain drive of suitable ratio, the pump is applicable to machine tools, or any other machine requiring flood lubrication over gear trains, chains or cams. It is intended for recirculation pump systems.

The special lip-style seal located on the drive shaft will withstand back pressures up to 20 p.s.i. Operational failure is eliminated by the venting of pressure to the inlet of the pump by means of a pressure relief system. A built-in relief valve prevents loading the seal above rated limitations. The pump can be mounted either on its shaft side or on the opposite face. When it is mounted on its shaft side, a concentric recess permits lining up drive shaft with pump shaft for free operating conditions, eliminating binding from misalignment.

The pump can be driven in either direction, the direction of drive determining the inlet and outlet ports. Discharge is 50 c.c.m. at 100 r.p.m., and recommended speed range is 20 to 1,000 r.p.m. The pump is capable of pumping at discharge pressure of 150 p.s.i. with approximately 80% efficiency. (Request Item No. F-8)

Hyster Tractor

The new Tugster industrial tractor recently announced by Hyster Co. is designed for towing of interplant trailer trains and for the gathering of warehouse orders. It has a drawbar pull of 750 pounds. The Tugster is powered by Wisconsin's air-cooled industrial Model AEN engine with 8.1 h.p. at 3,000 r.p.m. and has fully automatic drive. It is reported to be extremely economical in operation.

Simplified driving controls make the Tugster easy to operate. The throttle ring is mounted within the steering wheel and the hand operated brake control bar is forward of the operator and below the steering wheel. Steering ratios of either 1 to 1 or 3 to 1 are offered. A centrifugal clutch plus fully automatic transmission with an infinite series of ratios provides smooth power flow under all conditions. Travel speeds range up to 10 m.p.h. The Tugster has an over-all length of 61¼" and width of 37¾". Unexcelled maneuverability is accomplished by 360° steering, making it possible to operate in a 48" 90° intersecting aisle. (Request Item No. F-9)

Crane Attachment

A new crane attachment is now available for Oster Mfg. Co. portable lifts of 1,000 and 2,000 lbs. capacity and 56" lifts. This attachment can be furnished either with new machines at the factory or installed in the field on machines already in use. The boom extension of the attachment is adjustable for lengths of 30", 36" and 42". In the 30" position the end of the boom can be lowered to a minimum of 40" from the floor and raised to a maximum of 92". The 36" position provides a minimum of 35" and a maximum of 95" while the 42" position has a 30" minimum and 99" maximum. In the 30" boom position the machines have a lift capacity of 500 lbs.; the 36" position 420 lbs.; and the 42" position 375 lbs. The Oster crane attachment is demountable so that the portable lifts can be used with standard forks or platforms.
(Request Item No. F-10)

G. E. Induction Motors

The General Electric Co. has announced a new line of a.c. induction motors from 40 to 125 h.p.—the first major re-design for these sizes of motors in almost 20 years. The company becomes the first manufacturer to introduce a new design for its entire standard line of induction motors from 1 to 125 h.p. The motor line is built to new standards suggested by the National Electrical Manufacturers' Association which assign a greater horsepower to a given motor frame size. For instance, the 445U frame has been increased from 75 to 125 h.p. This re-rating program has been made possible by taking advantage of engineering advances in metallurgy, insulating materials and new production techniques.

Final phase of a 5-year design and development program was completed in May as the company prepared to begin full production of 40 to 125 h.p. motors in the new line. First phase of the program, involving motors in 1 to 30 h.p. (frame sizes 182 to 326U) was completed about 2 years ago. These motors, marketed under the Tri-Clad 55 trademark, have been so successful that now 98% of General Electric orders specify the new N.E.M.A. ratings. The new Tri-Clad 55 motor design in the higher horsepower frame sizes, 364U through 445U, includes a complete line of both open-dripproof and totally-enclosed, fan-cooled motors.

Built to N.E.M.A. standards MG1-3.02.a, MG1-5-.05.b and MG1-5.02.d, the new higher horsepower models were developed by the company's small a.c. motor and generator department. The new line features substantial weight and space savings, in

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addition to higher efficiency, quieter operation, improved performance and reduced maintenance. The weight reduction, compared with the former line, averages 20%. In general, the new models range from 100 to 500 lbs. lighter in comparable ratings. Lineal dimensions have been reduced an average of 10% and volume an average of 27%.

The weight and space savings have been achieved largely as a result of insulation improvements. The Class A system includes slot cell insulation with double-backed Mylar polyester providing greater physical and dielectric strength. Top sticks are made of non-hydroscopic Permafil glass with improved dielectric strength and higher heat resistance. The entire electrical system is designed to have a corona starting voltage well above operating voltage. Wire for stator windings is shaved after drawing to provide maximum smoothness of the wire surface and to reduce chances of tiny barbs piercing the insulation. The windings are varnish coated in an automatically timed dipping and baking process which maintains correct viscosity and the most consistent coverage and penetration.

Permafil glass cloth phase strips are used on 2-pole motors, reducing the problem of loose wires and wire fatigue, according to G. E. The entire pre-wound stator is given final treatment with Dri-Film silicone varnish which salt-fog tests reportedly show will last up to 5 times as long as stators without such treatment. Stator laminations of high quality silicone steel are automatically welded by the Fillerarc, gas-shielded, process for greater strength and penetration. An iron oxide coating insulates each punching for reduction of eddy current and the punchings are further protected with a varnish that maintains its insulating properties even when exposed to molten aluminum. Centrifugal casting reduces porosity of the aluminum conductor in the rotor. Rotor slots have been completely closed to reduce motor noise. Air passages have also been designed for noise reduction and panels are non-resonating. Every motor is given a series of automatic tests for noise, vibration and insulation.

A completely enclosed cast iron sealed bearing housing in the end-shield is designed to hold an optimum amount of grease. The larger capacity permits use of the new-type synthesized grease with a controlled bleeding rate. Drain plugs are from 1/8" to 1/2" larger than formerly to provide improved drain and grease relief. Close-running seals protect the bearing housings from the entrance of dirt. In the open-dripproof design the 1-piece cast iron frame has a larger area enclosed than formerly. The result is that the motor can be used in many applications which had required a splash-proof design. Double-end ventilation is provided to eliminate hot spots associated with straight-through ventilation. Air is drawn in from under both endshields, over the stator windings, and out the protected air exhausts on both sides of the frame.

One-piece cast iron frame and endshields with a 20G shock rating are features of the entire line, G. E. says. New knock-off lugs, four on each endshield, make the motor easier to disassemble for inspection. The totally-enclosed fan-cooled model has been designed for maximum protection when used in chemical and other corrosive atmospheres. Gaskets are used between the conduit box and frame and between the two diagonally split sections of the conduit box. The fan drives air over the motor at high velocity and pressure, and heavier ribs have been provided for greater surface cooling, according to G. E. reports.

(Request Item No. F-11)

Reinforced Flat Belt

A new reinforced flat belt combining the glove-like grip of leather with the super strength of plastic is now available for many types of power transmission applications. Distributed and sold under the name of Tanastic by J. E. Rhoads & Sons, this new belt consists of a plastic center welded to two outer plies of leather. The manufacturer states that Tanastic is ideally suited for many types of belt drives because Tanastic is said to maintain driven speed, be practically free from maintenance, be compact, shock absorbing and widely adaptable to varying drive conditions.

(Request Item No. F-12)

Instant-Setting Adhesive

A new adhesive developed especially for joining fabrics and other porous materials has been announced by the adhesive department of Raybestos-Manhattan Inc. Designated as Ray-Bond Adhesive R-87001, it is a rubber base type adhesive which has instaneous grab. This property is particularly important when joining the ends of ribbons, elastic bands and other fabrics without slowing production.

The adhesive is strong enough to permit joining the ends of the material without overlapping. It has a tensile strength (canvas to canvas) of 104 p.s.i. after 10 minutes and 112 p.s.i. after 24 hours. Ray-Bond R-87001 is resistant to water and diluted alkalis. It is not recommended for use where heat or solvents are present. It can be applied by extrusion or brush. To develop highest strength it should be allowed to set for 24 hours but joined parts may be used immediately after pressing together.

(Request Item No. F-13)

Ciba Dyestuff

Identified as the 30th dye in the Cibalan series, Cibalan Navy Blue RL Conc. is used in application of a navy shade on wool, nylon and silk. The new dye is easily shaded with other Cibalan colors to give fashion tones of uniformly good fastness. It imparts an attractive and bloomy navy blue which builds evenly to a level shade with good yield through heavy depths. No development or other after-treatment is required to obtain light and washing fastness. Application can be made at all processing stages of the fiber in a neutral bath or, with the aid of Cibalan Salt S, in an acid dyebath. The

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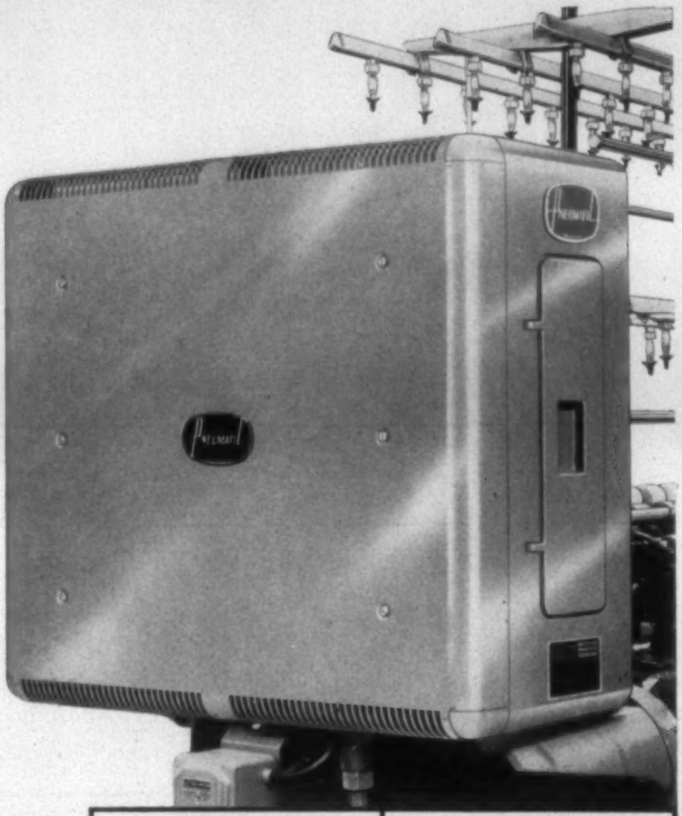

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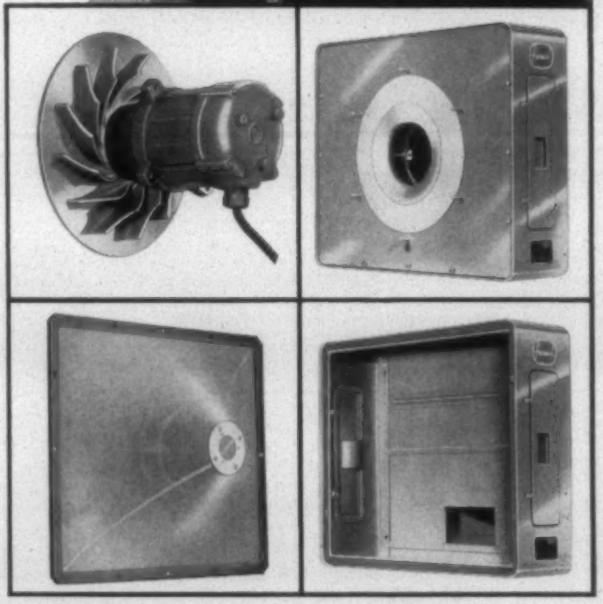

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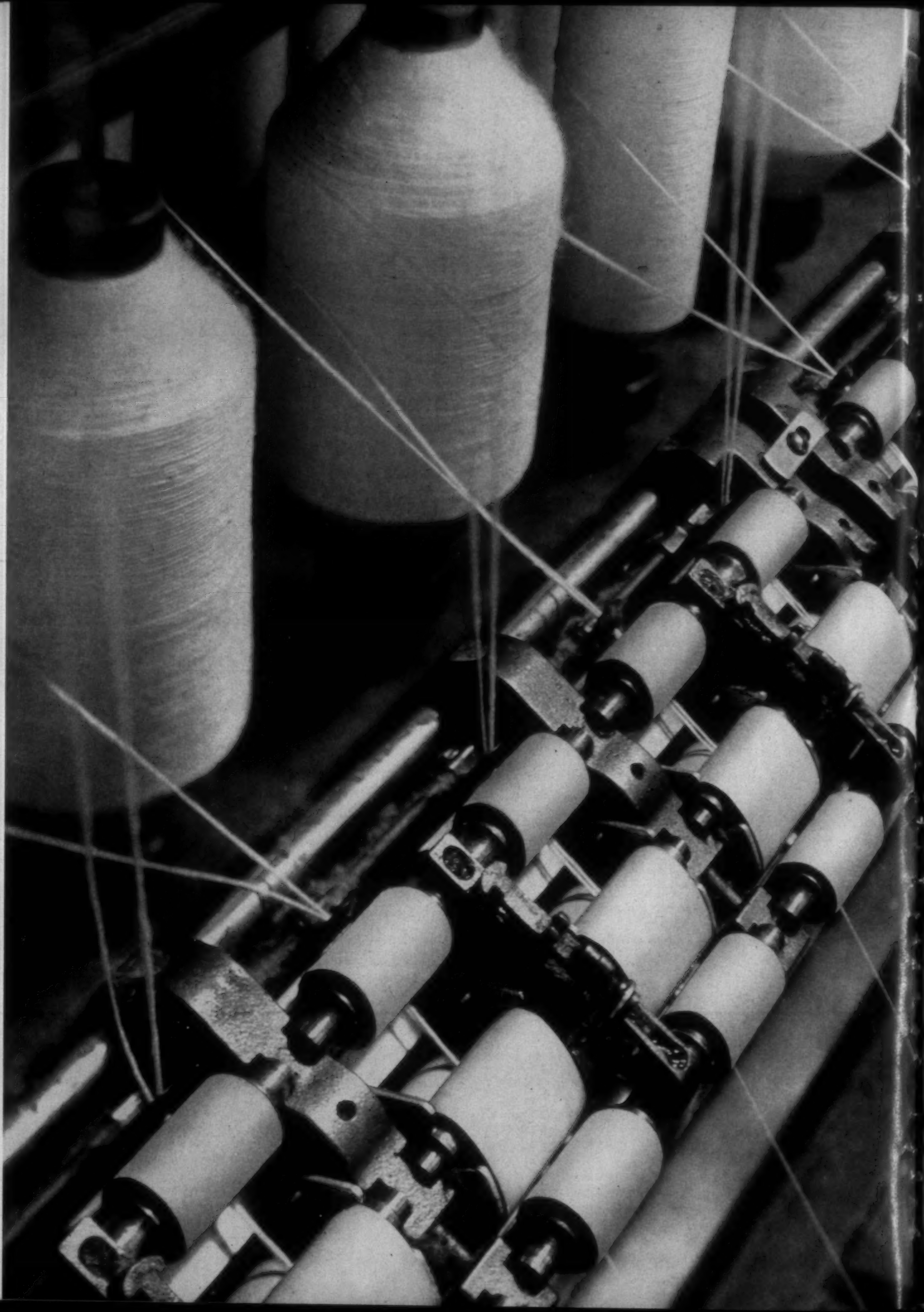
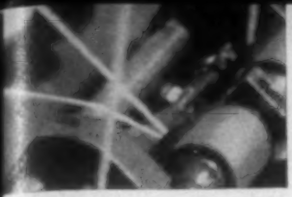
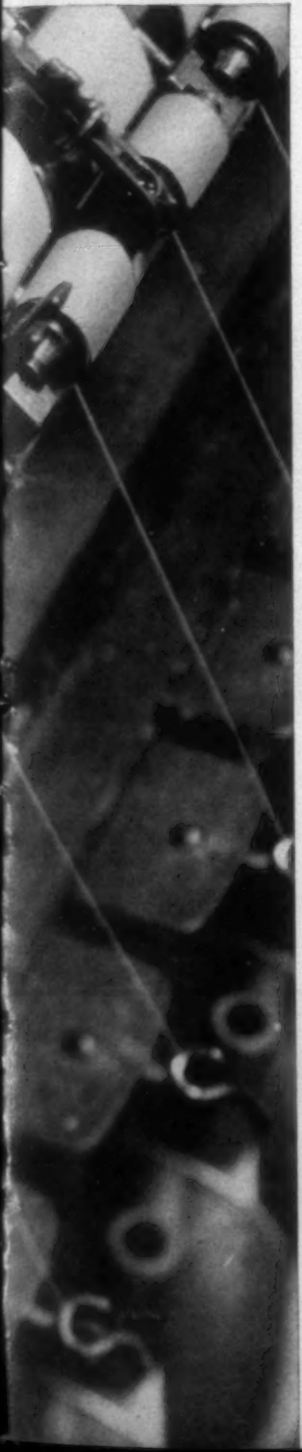




Why new Dayco AP 664 Aprons improve yarn uniformity

. . . give trouble-free drafting



Smoother operation is the reason new Dayco AP 664 Aprons draft more uniform yarn, either natural or synthetic. Newly developed, highly flexible compounds eliminate drag around the nose bar, even on the latest super-draft systems.

Semi-gloss pink inner surface gives far lower coefficient of friction. This reduces chatter — indication of jerky, uneven motion around the nose bar. Non-stretch, pliable cord body assures maintenance of uniform apron tension for surer drafting control.

All through the long life of the new Dayco Apron, the compounds in the light blue drafting surface maintain just the right coefficient of friction for improved fiber alignment. Special ingredients prevent lint from coating the surface, therefore the drafting surface always remains the same.

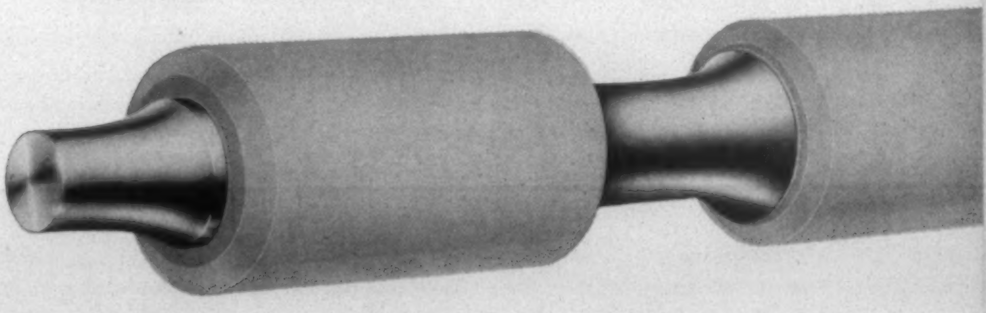
Compounded of materials which stubbornly, resist chemicals or oils, Daycos instantly resume quality drafting after shutdowns. They are not affected by heat or humidity, nor will they take a permanent set. Flipped and broken aprons are a thing of the past. Dayco Aprons are available for both single and double apron systems.

Your Dayco Representative will be in soon to give you full information on how new Dayco AP 664 Aprons will improve the quality of every yarn. Or write The Dayton Rubber Company, Textile Division, 401 S. C. National Bank Bldg., Greenville, S. C.

For even greater drafting control—

New Lap-resistant Dayco EW 661 Cots offer these advantages:

- Stay dry and solid despite heat and humidity
- Dissipate static • Resist all known oils



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Dayton Rubber

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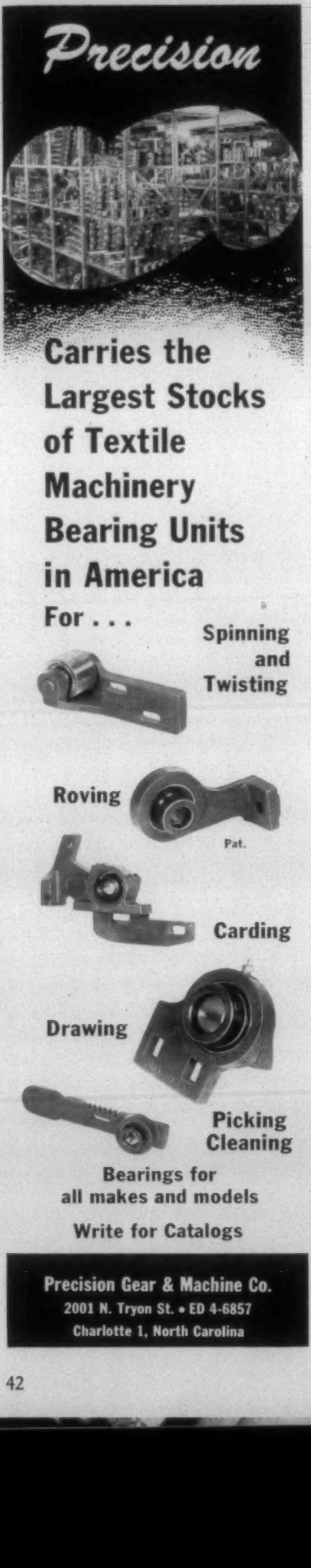
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shade turns slightly redder in artificial light. (Request Item No. F-14)

Sucrose Plasticizer

Development of a new polyurethane crosslinking agent, plasticizer and surface active agent intermediate made by reacting propylene oxide with sucrose has been announced by The Dow Chemical Co. The new product, octakis (2-hydroxypropyl) sucrose, will be sold under the trademark, Hyprose SP80. Only 1 molecule of propylene oxide is reacted with each of the 8 available hydroxyls in the sucrose molecule. This new product has excellent utility as a crosslinking agent for polyurethane foams prepared from polyglycols.

Hyprose SP80 may be added after the prepolymer reaction to produce low density foams with high load-bearing characteristics and good resiliency. It is less volatile and less affected by atmospheric moisture changes than either glycerine or propylene glycol. It has greater permanence on aging and has less effect on lowering the tensile strength of cellulosic materials, the company's tests have shown. Improved dimensional stability is said to result from the new product's use.

(Request Item No. F-15)

Safety Solvent

National Disinfectant Co. is offering a new safety solvent, SS-25, for use where there are toxic fumes and fire hazards. It is said to be 25 times safer than carbon tetrachloride and has no flash at the boiling point. It is safe and efficient for cleaning and degreasing electric motors, metal, machinery, electronic and electric components and equipment. SS-25 may be applied with a hand or air sprayer, brush, or a soft saturated cloth. It leaves no odor, is non-corrosive, leaves no residue and is safe for human skin. It is packaged in 55-gallon and 35-gallon containers.

(Request Item No. F-16)

Lap Scale With Recorder And Regulator Device

A fully automatic picker lap scale which is said to plot the weight of each lap produced onto a control chart and automatically correct each picker for off-standard laps has been developed and manufactured by Gifu Keiki Co. Ltd. The device is attached to the picker by pivoting to a hinged bracket at one side. The picker tender rolls the lap forward, when doffing, into the pan of the scale and a shock-absorbing attachment is shorted out applying the full weight of the lap to the weighing mechanism automatically. An adjustable damping mechanism rapidly brings the lap to rest. The weight is indicated on a horizontal dial at the right of the scale. A pen plots the weight on the recorder drum. The recording drum then moves one segment to record the next lap.

A pilot lamp in front of the scale dial lights to indicate that the lap weight has been recorded. If the adjustable accept-reject control limits have been exceeded, one of the lights in the control box flashes on. A red light indicates a lap which is too heavy and a blue light indicates a lap which is too light. A green light comes on if the lap weight is within the prescribed limits.

Even on acceptable laps, if the inner set of adjust limits (which can be pre-set to within plus or minus 0.1 lbs.) are exceeded, a motor automatically turns the weight handle the correct amount to bring the next lap back inside the control limits. This action is regulated by the automatic feedback mechanism. The pilot lamp flashes a specific number of times to indicate the degree of correction that has taken place.

Other features include a double set of tare weight controls to adjust for both the desired mean gross weight and the moisture content. Also provided is a set of push buttons on the control box to manually adjust the weight to handle heavier or lighter specific amounts in accordance with the number of flashes of the pilot lamp. The entire electrical system is enclosed with micro and mercury switches used to prevent sparking at the contacts. (Request Item No. F-17)

Warwick Resin

Warcoset LCR is a new, low-cost cellulose reactant developed by the Warwick Chemical Division of Sun Chemical Corp. The product, described as the best resin for chlorine resistance now available, has only a minimum effect on the light fastness of dyestuffs. It is recommended for both cotton and viscose materials. Easy to handle and apply, Warcoset LCR produces an exceptionally well balanced combination of qualities that is not possible with any other single resin. Fabrics finished with the new resin have improved crease resistance, greater shrinkage and stretch control, and the curing conditions recommended are much less critical than with conventional resins.

The resin is a clear liquid, formulated with a low free formaldehyde content. Extensive plant tests reveal it is soluble in water and compatible with a wide variety of finishing agents. There is virtually no degradation from chlorine bleaching even under high temperatures or alkaline launderings. In addition, it has excellent stability in storage, and does not require refrigeration. (Request Item No. F-18)

Porosimeter

The coolness of a lady's blouse can be easily tested on a new portable instrument which uses stainless steel in two critical areas. The new testing machine, made by the American Instrument Co. Inc., is called a Porosimeter. Stainless steel, supplied by Allegheny Ludlum Steel Corp., was used in making the instrument because of the metal's strength and non-corrosive properties.

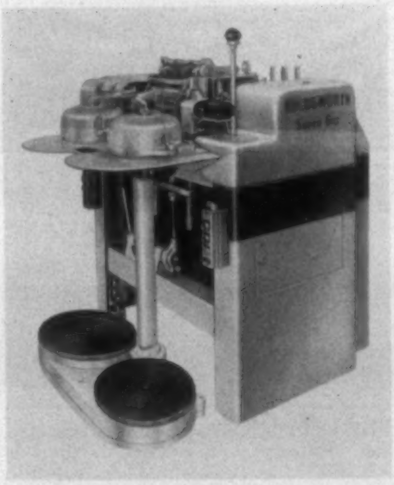
If size and number of pores in materials is known the quality and performance of the product can be accurately predicted. For example, the quality and performance of textile filters can be determined through a pore-structure analysis. The Porosimeter measures the sizes of pores in any material with pores ranging from 0.1 millimeter to 0.06 microns, and determines pore volumes as small as 0.0005 milliliters at each pore diameter.

The instrument works on the principle that mercury will penetrate the pores of any porous material if sufficient pressure is applied. Initially an experiment is run by placing a small sample piece of the material to be tested within a glass enclosure. Only pressures below atmospheric are used to force mercury into the pores while the sample is kept in this location.

To measure smallest-size pores, the sample is moved to a vertically-sliding, stainless steel pressure vessel. Here, pressures up to 3,000 p.s.i. are applied to the sample. Pressure is fed to the testing vessel through a series of stainless steel tubes. As pressure is raised, mercury is forced into smaller and smaller pores, the volumes of which are continually being indicated by the mercury level as it drops in the calibrated container.

(Request Item No. F-19)

Gilling Machinery



The Super Gill (Holdsworth Mfg. Co. Inc.)

The Holdsworth Mfg. Co. Inc. has announced its latest development in gill reducing machinery. Known as the Super Gill, field tests have shown that the new equipment provides a 50% increase in production in some cases. This increased production is achieved by stepping up the entering speed from 10 to 15 y.p.m. while reducing faller drops from 1,800 to 1,500 per minute. The Super Gill is said to have the highest entering speed of any gilling equipment now in existence.

The new machine has simplified design to reduce the number of working parts thereby eliminating causes of wear and cutting maintenance cost. Also incorporated in the equipment is a variable speed drive which permits the operator to make draft changes quickly by setting a dial while the machine is in operation. Automatic reduction of any irregularities of feed weight from extremes of plus or minus 15% down to less than ½% is provided for by the incorporation of a Raper Autoleveller.

(Request Item No. F-20)

Bacteriostatic Gum

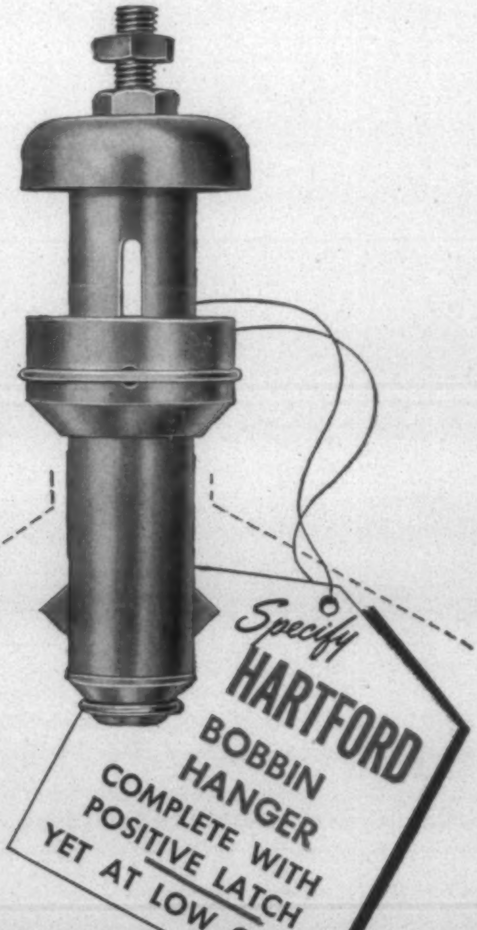
A new polymer gum, called DMHF and unique in that not only is it not subject to bacterial or enzymatic decomposition but also it prevents other components from decomposing and losing strength and developing bad odors, has been announced by Glyco Products Co. This gum is water-white and practically odorless. It has a melting range of 59-80° C. It will dissolve in cold water, in all proportions, to give non-viscous, neutral clear solutions.

It is soluble in methyl and ethyl alcohols, ethyl acetate, methylethylketone, chloroform, methylene chloride and hot glycerin. It is insoluble in aromatic and non-polar solvents. Solutions of this polymer gum deposit films and coatings of good gloss and adhesion. These films are resistant to benzene, ether, carbon tetrachloride, trichloroethylene, gasoline, oils, fats and many other organic compounds. They may be removed readily by water or alcohol.

(Request Item No. F-21)

Wool Detergents

Nopco Chemical Co. has recently developed 2 nonionic detergents, Syntergent 35-K and Syntergent 35-T, for the scouring of raw wool at low temperatures. Each product is designed to replace conventional



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scouring with alkalis or other nonionic detergents. Syntergent 35-K is applicable to all types of wool but Syntergent 35-T is specifically suited to carpet wools. The advantage of eliminating the use of alkalis in the scouring liquor results in a softer, loftier and whiter wool. Since the fibers retain their natural elasticity, the stocks are easier to card, draft and spin. Additional advantages include low scouring temperatures of 120°-130° F. and improved color of recovered wool grease.

(Request Item No. F-22)

Strapping Tool

Latest development in power tools for tensional strapping is Brainard Steel's new P.N.E. Stretcher. Weighing less than 4 lbs. but with unlimited take-up, the new air-powered tool is faster, lighter and quieter than conventionally designed power tools.

Available for tensional width straps of ⅜", ½", ⅝" and ¾", the tool may be adjusted to all gauges in the width it handles. Because of its pneumatically controlled tension and unlimited take-up, the new tool is expected to reduce operator fatitgue and errors in tensioning. It comes equipped with 8 ft. of air hose and coupling and is suitable for all applications previously covered by Brainard 2E and 2H stretchers.

(Request Item No. F-23)

Tint And Softener

Arko Fluor Tint is the trade name of fluorescent colors which were recently developed by the Arkansas Co. Inc. When applied to woolen yarns at low concentrations the tints provide simple and positive identification. When examined under ultraviolet light, wool treated with these tints shows a characteristic shade such as blue, yellow or yellow-green. The Arko Fluor tints are readily removable from the woolen yarn by a light scouring operation.

Another new product from the company is Softener O R which is a new type of cationic finish. This softener imparts an exceptionally soft and lofty hand to fabrics composed of acetate, Acrilan, nylon, Orlon, rayon and wool. Beside its softening properties, Softener O R has excellent resistance to yellowing under normal drying conditions. (Request Item No. F-24)

Humidity Indicator

The new Remote Humidity Indicator, designed for measuring humidity of closed areas, has been announced by Serdex Inc. This unit has wide application in the laboratory and in plant operations. The indicator can be located in office, laboratory or control room. An air line is run into the area to be sampled and a vacuum pump or line draws the sampled air through the indicator. Only 2 connections are necessary for installation of the instrument. One connection from the inlet at the bottom of the indicator case and another from an outlet at the top of the case connected to a vacuum pump or line is necessary. For production use, the indicator can be installed permanently to give continuous humidity readings which are guaranteed to an accuracy of plus or minus 1½%.

(Request Item No. F-25)

Liquid Detergent

Oakite LSD, a new liquid detergent designed for use in solution lifting steam guns and self generating steam cleaning equipment, has just been introduced by Oakite Products Inc., manufacturer of industrial cleaning materials and equipment. Developed to simplify the preparation of steam cleaning solution and to reduce the clogging of coils in self generating equipment, it will handle a wide variety of steam cleaning operations ranging from light to medium-heavy duty. Oakite LSD is said to provide effective soil removal at concentrations of one to two ounces to each gallon of water as delivered by the gun. Used as recommended it is claimed to be safe on steel, brass and magnesium, and to have no effect on painted surfaces. Its solutions have a pH of 12 in the operating range. It is said to produce no offensive fumes.

(Request Item No. F-26)

Dexter Softener

Development of a low-cost substantive softener for use with all fibers, either as a self-softener or in resin finishes, has been announced by Dexter Chemical Corp. Dexene CS-15 is a cationic-nonionic agent being manufactured under a recently-developed process. It may be used either on the alkaline or acid side and is claimed to be compatible with a wide variety of thermo-setting and thermo-plastic resin formulations. Because of its even rate of exhaustion, Dexene CS-15 is said to insure uniform softness throughout the package or beam in pressure machines. It is recommended as an excellent napping assistant and as a means of lubricating the fibers to insure high-speed cutting and sewing. Among other characteristics claimed for the product are: low chlorine retention, high resistance to yellowing and excellent solubility.

(Request Item No. F-27)

For the Mill Bookshelf

Pillow Blocks

The New Departure Division of General Motors Corp. has announced the availability of a 10-page catalog illustrating new and advanced ideas in pillow blocks. The catalog includes data on construction features, dimensions, load ratings, interchange data, engineering information, mounting instructions and maintenance hints.

(Request Item No. F-28)

Hinged-Cover Wireway

A new hinged-cover wireway with each length and fitting completely accessible for lay-in wiring, is the subject of a revised 4-page, 2-color bulletin issued by the distribution assemblies department of the General Electric Co. The new publication (GEC-1426A) describes in detail application, features and selection data on the new wireway, designated the Type HW. Also listed are catalog numbers, ratings, dimensions and guide form specifications. Available in even 1-foot through 5-foot lengths, the new wireway is manufactured in 4x4, 6x6 and 8x8 inch sizes.

(Request Item No. F-29)

Portable Belt Conveyor

An informative 4-page bulletin with complete details on the new lightweight Trojan "A" Series portable belt conveyor has been published by The E. W. Buschman Co. The new bulletin, 50AA, details the features and cost-cutting advantages of the aluminum Trojan "A" Series with incline hydraulically adjustable to desired angles by finger-touch operation. Uses of the new units for heavy-duty loading, unloading, stacking and boosting at angles up to 30° are described. Information on available sizes is given as well as drawings and charts of proper operational adjustments, integration with gravity and roller sections, detailed component specifications and optional equipment. The bulletin illustrates how the boom section, with floor stands and other optional equipment, adapts the unit for horizontal, inclined and interfloor use and as a booster in automated conveyor lines. (Request Item No. F-30)

Pneumatic Control

A new bulletin on pneumatic control instruments, featuring more than 10 pages of general automatic control theory has recently been published by The Bristol Co. The 44-page 2-color bulletin, A130, describes in simplified terms and illustrations the basic concepts of narrow band, proportional, reset, derivative and reset plus derivative control actions. Also covered are selective, cascade control and ratio control.

Completing the bulletin are descriptions of the features of the company's line of Series 500 pneumatic recording and indicating controllers. Also included is com-

plete information on sensing elements used with the instruments for measuring and controlling such variables as temperature, pressure, humidity, flow, density and specific gravity, liquid level and pH. Final control elements and accessories are listed.
(Request Item No. F-31)

Relief & Pressure Valves

Milton Roy Co. has published a new bulletin No. 357 describing its line of chemical relief valves and back pressure valves. The 4-page, 2-color bulletin gives complete specifications including capacities of 4 standard sizes—¼", ½", ¾" and 1". Dimensions and materials of construction are also included.
(Request Item No. F-32)

Clark Trucks

The complete line of fork-lift trucks, straddle carriers, powered hand trucks and towing tractors produced by the Industrial Truck Division of Clark Equipment Co. is described in a 16-page, 4-color catalog just published by the company. Fork trucks treated include the solid tire and pneumatic tire gas-powered models in the new Clark-lift line, solid tire and pneumatic tire gas-powered models in the standard line, solid tire electric-powered models and the new line of gas and diesel-powered, pneumatic tire Rangers. Specifications given for each model include capacity, turning radius, width, length, fork length, lift heights and service weight.

Specifications given on 8 straddle carrier models include capacity, wheelbase, length, width, height, package height, package width, road speed and service weight. Units of the Powrworker line of electric-powered hand trucks described include tuggers, pallet trucks, low-lift platform trucks, high-lift platform trucks and stackers. Specifications include capacity, fork or platform length, lift height, down height, length, width and service weight.

Eight towing tractors are described, including gas-powered, electric-powered, solid and pneumatic tire models. Specifications indicate drawbar pull, maximum capacity, turning radius, width, length, height and weight. In a special section 24 attachments for fork trucks are illustrated. A quickly read reference chart indicates which attachments are available for each fork truck in the Clark line.
(Request Item No. F-33)

Gage Glass Cleaning

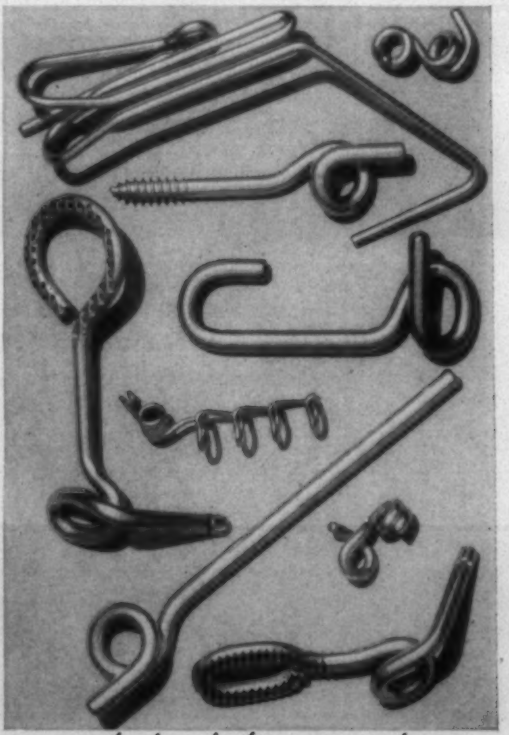
Jerguson Gage & Valve Co. has published a new data unit, No. 301, which describes and illustrates the method of operation of the Jerguson gage glass cleaning tool. The new tool uses brushes to quickly and efficiently clean inside of liquid level gage glass. (Request Item No. F-34)

Gravity Conveyor

Application ideas and features of Rapistan Flow Track are described in a new bulletin recently published by the Rapids-

What Do the Great Pyramids Have to Do With
TEXTILE HARD CHROMIUM PLATING?

In ancient Egypt, the religious belief that the body must be preserved intact after death to achieve eternal bliss led to the construction of massive tombs durable enough to protect the dead against evil spirits or marauders through ages of oblivion. The most famous of these, the three Great Pyramids of Gizeh, each covering approximately 13 acres and towering nearly 480 feet, remain today as indestructible symbols of the marvelous engineering skill and sheer perseverance of the Egyptians who built them forty centuries ago.



When it comes to longer-lasting protection for your thread guide, WALHARD Hard Chromium Plating is your answer. Outstanding workmanship and 20 years' experience exclusively on Hard Chromium back the WALHARD signature, guaranteeing you substantial savings in maintenance and down-time costs. Don't be satisfied with less than the best — specify WALHARD on your next Hard Chromium Plating order for polished or satin finished guides.

Be sure you are getting quality — it costs no more and lasts longer.

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SAVES LABOR

EASIER TO INSTALL

TAKES LESS FLOOR SPACE

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UNIVERSAL CARD COILER
(Patents Pending)

This coiler is its own best salesman. It outsells all the rest put together because it out performs all others. It saves labor by putting more sliver in the can. Its quality construction, including sealed ball-bearings, hardened steel gears, etc., means extra years of dependable service. Ask for free folder with complete specifications.

Let this coiler prove its worth to you in your mill. Have one installed on a

90 DAY TRIAL *Without Obligation*

Since 1890
McDONOUGH POWER EQUIPMENT, INC.
MACHINE & FOUNDRY DIVISION
McDONOUGH, GA., U.S.A.

Standard Co. Inc. Rapistan Flow Track is a gravity conveyor in its basic form. This conveyor strip can be combined with other conveyors or be used in various combinations of itself for a multitude of purposes. The new Flow Track bulletin illustrates many applications of this inexpensive conveyor track. Complete specifications are also included in the new literature.
(Request Item No. F-35)

General Aniline Dyestuff

General Aniline & Film Corp. has announced the release of a new circular, G-797, covering Algol Brilliant Blue 4G infra paste and Alcol Brilliant Blue 4GWP Powder. The new straight, greenish-blue, vat dyestuffs are said to be characterized by exceptional brightness of shade and by outstanding light fastness on both cotton and rayon. The company reports that the outstanding features of the new products are excellent dispersibility and exceptional stability of the paste brand in storage. Full information on the products is contained in the circular. (Request Item No. F-36)

Drives and Pulleys

A new 8-page, 2-color booklet entitled *The Moving Force of Industry* describes in photos and captions the complete line of a.c. and d.c. motors, gearmotors, motor-generator sets, motor controls and complete packaged mechanical and electronic adjustable-speed drives engineered and manufactured by Reliance Electric and Engineering Co. and the Reeves Pulley Division. The new booklet, designated Bulletin A-2501, is available through using this journal's reader service request card.
(Request Item No. F-37)

Fork-Lift Truck

Engineering specifications, dimensions and mechanical features of the 5,000-lb. capacity gas powered model in the Clark-lift line of fork trucks are contained in a 6-page, 4-color brochure now available from the Industrial Truck Division of Clark Equipment Co. Engineering specifications include pertinent data on the engine, power train, automatic Hydratork Drive, hydraulic system, upright assembly and other components. Charts and drawings indicate operating dimensions such as lifting heights, drawbar pull and turning radius. Photographs and sketches describe such features as finger-tip control levers, quick take-off counterweight, swing-up hood and self-adjusting brake. (Request Item No. F-38)

Magnesium Dock Board

Magline Inc. has published a bulletin on Perma-Docks — its new line of standard magnesium dock boards for installation on concrete docks. Bulletin DB-215 presents Perma-Docks as a practical answer to the cost problems involved in the installation of permanent-type dock levelers and describes how these light, easy-to-handle units self-adjust to truck or trailer floor levels automatically. Features cataloged in the bulletin include an electric-hydraulic system for fully automatic operation, special safety curbs for power truck tire protection and crowned design for the prevention of low underclearance equipment hang-up. The bulletin also includes engineering details and specifications data.

(Request Item No. F-39)

Corn Product Statistics

Corn Industries Research Foundation Inc. has announced the publication of a 450-page statistical volume, *Critical Data Tables*. The new book is described by the foundation as "the most complete compilation to date of tables, charts, graphs and similar information pertaining to processes and products of the corn-refining industry."

An earlier edition, limited to distribution within the industry, has gained increasing attention among libraries, universities and other industries as a reference source. For this reason the volume has now been revised, published and made available to the general public at cost, the foundation state.

The book contains sections devoted to important physical properties of products from corn and related products. Detailed statistical treatment is given to such subject headings as analysis, boiling points, freezing points, moisture equilibrium, refractive indices, viscosities, specific heats, densities optical rotations, flash and fire points and solubilities. In addition, essential humidity and water tables, factors, corrections and conversion tables are included. The book is indexed to facilitate use of the data. Requests for copies are being handled by the Corn Industries Research Foundation office at 1001 Connecticut Avenue, N. W., Washington 6, D. C. Price of the volume is $4.00 postpaid.

(Request Item No. F-40)

Motor Operation

The pictures and captions of 2 sound slide films have been published in booklet form by the Allis-Chalmers Mfg. Co. The film stories are told in bulletins 51X8581 and 51X8582 and are entitled, *How To Make A Motor Go . . . And Go, and Go and Go*, and *How To Take Step Seven*. Both bulletins are easily understood and descriptive. (Request Item No. F-41)

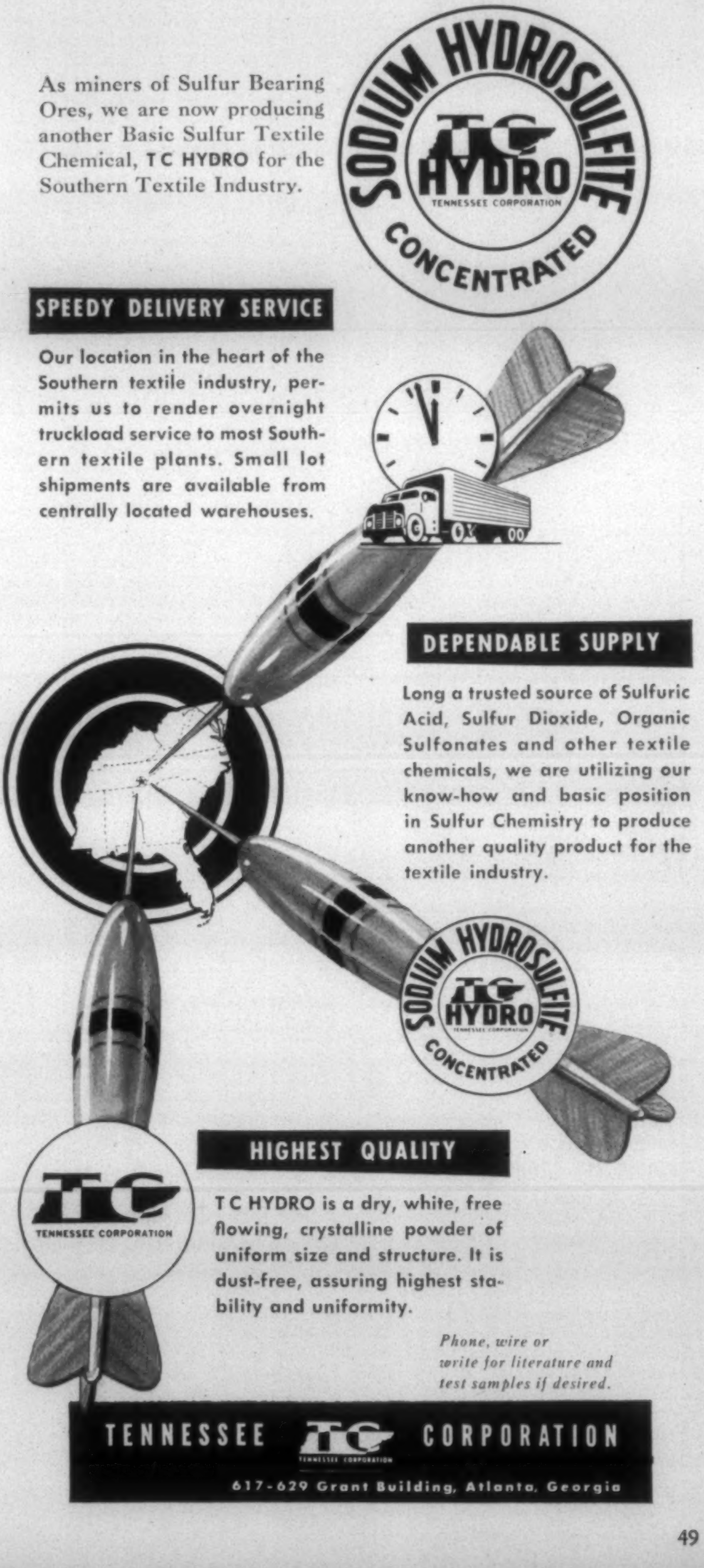
Dyeing Dacron/Cotton

The Du Pont Co. has announced a new technical bulletin, D-88, which describes dyeing of yarns made from blends of Dacron and cotton. Also included in the literature is information on finishing yarn-dyed fabrics. The 12-page bulletin is comprehensive in its coverage and contains schematic diagrams of some of the processes.

(Request Item No. F-42)

Towel Absorbency

Bulletin No. 19, published by the clothing, textiles and related art department of



As miners of Sulfur Bearing Ores, we are now producing another Basic Sulfur Textile Chemical, **TC HYDRO** for the Southern Textile Industry.

SPEEDY DELIVERY SERVICE

Our location in the heart of the Southern textile industry, permits us to render overnight truckload service to most Southern textile plants. Small lot shipments are available from centrally located warehouses.

DEPENDABLE SUPPLY

Long a trusted source of Sulfuric Acid, Sulfur Dioxide, Organic Sulfonates and other textile chemicals, we are utilizing our know-how and basic position in Sulfur Chemistry to produce another quality product for the textile industry.

HIGHEST QUALITY

TC HYDRO is a dry, white, free flowing, crystalline powder of uniform size and structure. It is dust-free, assuring highest stability and uniformity.

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617-629 Grant Building, Atlanta, Georgia

the University of Alabama's school of home economics, entitled, *The Absorptive Properties of Bath Towels*, has been made available as long as a limited supply lasts. The absorptive properties of 11 white cotton bath towels, in a range of weights were studied after 1, 3, 5, 10, 15, 30, 45, 60, 80 and 100 launderings. Results of the tests are reported by Henrietta M. Thompson who is head of the department. (Request Item No. F-43)

Reinforced Flat Belt

A colorful, 8-page booklet introducing a new plastic reinforced flat belt under the tradename of Tanastic is announced by J. E. Rhoads and Sons. Entitled *A New Concept in Belt Drives*, the booklet describes design and application features along with adequate selection and installation data. (Request Item No. F-44)

Emulsion Polymers

Vikon Chemical Co. has issued new technical bulletins which describe the properties and uses of vinyl acetate emulsion polymers Vikon QL and Vikon RL and emulsion copolymer Vikon FPB. Uses in various textile finishing operations are described, including cotton piece goods and cotton knit goods finishing, use in crease resistant resin finishing and use in backing and coating textile fabrics. The physical properties of the emulsions and the films are also described. (Request Item No. F-45)

Stainless Steel

A new 32-page booklet on stainless steel sheet and strip which gives detailed information on these products is now being distributed by Allegheny Ludlum Steel Corp. The booklet has more than 20 tables including detailed data on a stainless steel finder, corrosion resistance of various stainless steels, fabrication properties and weight tables per lineal foot in various widths and gauges. There are sections on the proper selection of stainless steel grades and an index of applications in the textile industry. (Request Item No. F-46)

Plug-In Busway

A plug-in busway, designed primarily to serve as feeders for lighting and power loads, is the subject of a revised 20-page bulletin issued by General Electric's distribution assemblies department. Known as the Type FVK, the plug-in busway is suitable for 2 and 3-pole, 600-volt, 3-phase 4-wire, 120/208Y-volt; and 3-phase, 4-wire, 480Y/277-volt applications in industrial, commercial and public buildings. The revised bulletin (GEA-6470A) describes in detail the functions, applications and features of Type FVK plug-in busway. It also lists ratings, weights, technical data, installation data and guide form specifications. (Request Item No. F-47)

Safety Practices

Take care of your 10 best tools—your fingers. That's the advice the National Safety Council imparts in a new 8-page pamphlet. Cartoon illustrated, the colorful pamphlet warns workers against hand injuries. Working hands always are exposed to danger, the council noted in its advice on how to protect them. Splinters, careless use of equipment, machinery and solvents—they're all potential destroyers of the 10 best tools. Regardless of your line of work, if you handle with care your tools you'll keep them at top performance, the council publication advises. Further information and prices may be obtained from the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

Serving The Textile Industry

Universal Winding Sets Plant Vacation Schedule

Universal Winding Co. has announced that its plant will be closed for annual vacationing from Monday, July 29 to Monday, Aug. 12. Sales offices will remain open as usual, the company points out, but the plant at Providence, R. I., will handle emergency parts orders only during the period. The company asks that its customers anticipate their requirements so that shipments will not be scheduled during the period.

Houghton & Co. Plans To Double Its Facilities

E. F. Houghton & Co. of Philadelphia, Pa., producer of textile chemicals, has announced plans to double the facilities at its Detroit, Mich., plant. The addition is being built to meet increased demands. The plant will produce the same line of products as do the company's other plants which are located in Philadelphia, Chicago, Ill., and San Francisco, Calif. The company expects to begin production in the new facilities by the end of this year.

Friday Textile Machine & Supply Co. Inc. Formed

Friday Textile Machine & Supply Co. Inc. has been organized in Gastonia, N. C., by D. L. Friday, K. A. Payne and John R. Friday. It has an authorized capital stock of $100,000 with 1,000 shares valued at $100 each. D. L. Friday was formerly general manager of Cocker Machine & Foundry Co. of Gastonia.

Celanese Corp. Acquires Plant Site In N. C.

The Celanese Corp. of America has acquired a 76-acre plant site near Siloam, N. C. Company spokesmen said that use of the plot would be dictated by the future growth and development of the textile industry. The company also has an option on 125 adjoining acres.

Kidde Mfg. Co. Opens Sales Office In Charlotte, N. C.

Kidde Mfg. Co., producer of machinery for the textile industry, is opening a new sales office in the Johnston Building, Charlotte, N. C.

Link-Belt Co. Acquires Land Near Atlanta

Link-Belt Co. has announced the acquisition of 41 acres of land about 11 miles south of Atlanta, Ga., as a possible future plant site. No specific plans have as yet been made regarding the use of the site which is located on the Central of Georgia Railroad, at the intersection of Morrow Industrial Boulevard and Route 54 in Clayton County.

Expansion Slated At Saco-Lowell's Sanford Plant

Saco-Lowell Shops of Boston, Mass., has announced that it will expand its plant at Sanford, N. C. Details of the expansion have not been given as yet.

Plastic Quill Maker To Establish In Belton, S. C.

A new manufacturing enterprise in the field of plastics will soon be opened by Mimosa Corp. at Belton, S. C. Employment of several hundred persons is expected. The Evansville, Ind., company will take over an existing 50,000-sq.-ft. building. It is reported that production at the plant will be concentrated in numerous injection molded, glass reinforced quills, spools, bobbins, pirns and similar equipment.

Fireproofing Completed At Mt. Hope Units

The Mount Hope Finishing Co. has announced the completion of a 12,000-sq.-ft. addition to its plant at Butner, N. C., and the fireproofing of the installation. Three sides of the plant, including the new addition, have been cement-blocked for further protection from fire. The company says that the completion of this program means that both the Butner and Henderson, N. C., plants are now amply protected against fire and flood.

American Viscose Forms New Staff Department

The formation of a technical and textile service department has been announced by American Viscose Corp. The new department represents the merger of the textile research department and the corporation technical department. The basic purpose in establishing this department is to provide in one organizational unit, technical assistance of a staff nature to both the manufacturing and the sales activities of the operating divisions.

Fletcher Standardizes And Changes Assembly Lines

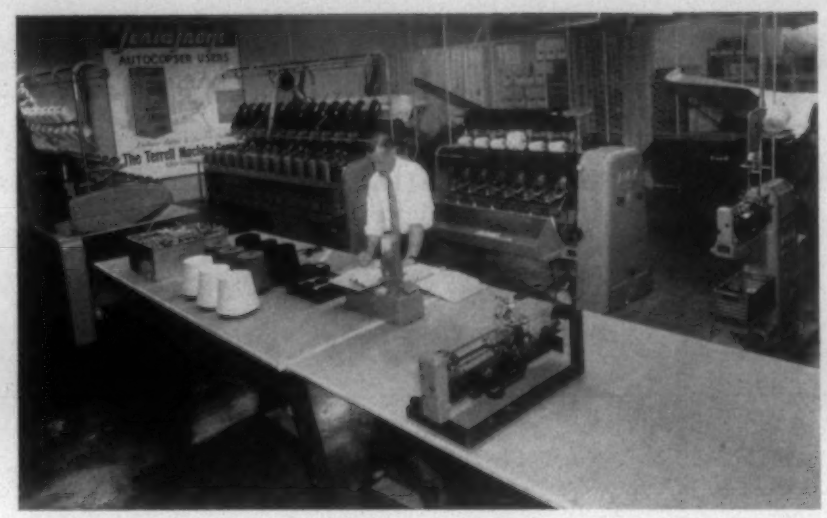
The Fletcher Works of Philadelphia, Pa., has announced the standardization of its looms into one length. All Fletcher looms will be 9' long except for orders for special length looms. By standardizing its narrow fabrics looms and all parts the company feels it is offering weavers the advantages of: (1) standardization of maintenance; (2) reduction in the cost of housekeeping and maintenance; and (3) a reduction in parts inventory. The company has also announced that 3 new straight-line assembly lines for narrow fabric looms have been set-up by its textile division. The new assembly lines handle a loom from its original framework through to the completed loom. The assembly system is 120' in length. The 3 separate lines, built on the first floor of the company's 200,000-sq.-ft plant, can be run simultaneously or one at a time.

Plant Being Built For Creslan Manufacture

American Cyanamid Co. has started construction of a multi-million dollar plant in Pensacola, Fla., for the production of Creslan. The company looks forward to a broadening market for Creslan as acrylic fibers are steadily increasing their share of the fibers market. Scheduled for completion late in 1958, the plant will be one of the world's most modern textile fiber installations. Annual capacity of the plant is expected to be 27 million pounds of Creslan staple and tow. Its construction is part of the company's current expansion program. It is reported that the plant will employ some 375 persons and have an annual payroll of $1,500,000.

Plans Told For Autocopser Sales And Distribution

Dr. Walter Reiners, president of W. Schlafhorst & Co. of M. Gladbach, Germany, recently paid a visit to this country to inspect the new facilities of American Schlafhorst Co. at Charlotte, N. C. New facilities of the subsidiary firm include a complete testing area; an area devoted to the training of mill fixers; and a storage area for spare parts for the Autocopser, Schlafhorst's high-speed, fully automatic quiller.



Practical instruction is given to mill fixers in this test room. Yarn samples from the mills are also run on this equipment to determine the running characteristics of the yarns and the expected personnel necessary to handle the customers production. A survey such as this can be used in anticipating the return on the investment and the expected cost per pound of quilling filling yarns.

At a special press conference, Dr. Reiners and W. S. Terrell, president of American Schlafhorst and vice-president of Terrell Machine Co., outlined the company's progress and reviewed plans for the future. The Autocopser, first introduced in 1954, was demonstrated to the visiting journalists following the press conference. To offer the high-speed quiller to the American and Canadian markets, American Schlafhorst was incorporated to import and distribute the Autocopser. Terrell Machine Co., in turn, contracted with American Schlafhorst to sell, supervise the installation of and service the automatic quiller.

The new facilities of American Schlafhorst are located in the expanded Charlotte quarters of Terrell Machine Co. The facilities were built as part of a realization of the importance of good service to Autocopser customers. To date, more than 90 fixers have received instruction in a number of two-week courses devoted to practical and theoretical lectures on the Autocopser. The courses are offered as a free service in addition to a regular free inspection service of Autocopser installations in the U. S.

A complete stock room is also maintained, making all parts available on a day's notice. In case of national emergency or disruption of supplies from Germany, it was pointed out at the press conference, all Autocopser drawings are held in escrow and are available should it become necessary to manufacture component parts in this country. All electrical equipment, such as motors and controls, are of American manufacture.

When a customer expresses interest in the Autocopser, Terrell Machine Co. first runs a test with the mill's yarns and quills in the test room. Based on the findings thus obtained, a survey is presented recommending the required size of the installation as well as the number of personnel necessary to handle it. The survey also shows the expected return on the investment and the expected cost per pound.

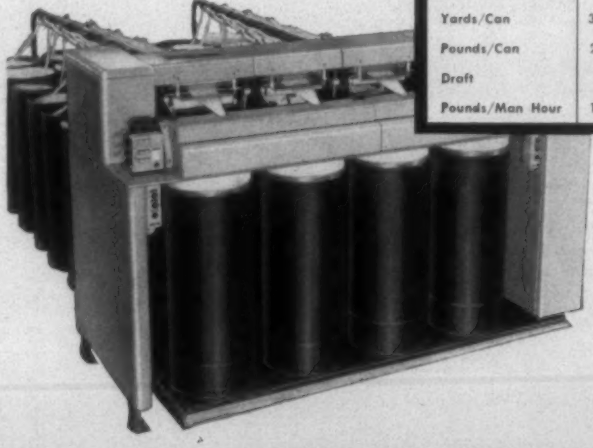
In discussing his firm's operations with the press, Dr. Reiners said he hopes Autocopser production can be stepped up; that units can be introduced with individual pinboard attachments for the synthetic field; and that an automatic loading device for boxes used on the Draper automatic loom battery can be introduced in the near future.

In this classroom mill fixers receive theoretical instruction on the operation of the quiller. The two-week course is a free service to the company's customers.

COMPARE THESE TYPICAL VERSAMATIC PERFORMANCE FIGURES WITH YOUR CURRENT DRAWING FRAME PRODUCTION...

Performance which clearly indicates SACO-LOWELL'S *NEW* VERSAMATIC* DRAWING FRAMES belong in your mill

Mill	A	A	B	C	C	D	D
Stock	Carded	Carded	Combed	Combed	Combed	Combed	Combed
Process	1st Process	2nd Process	1st Process	1st Process	2nd Process	1st Process	2nd Process
Model Versa-matic	4 Over 5	4 Over 5	3 Over 4	3 Over 4	3 Over 4	3 Over 4	3 Over 4
Sliver Fed	52.5 gr.	54 gr.	55 gr.	120 gr.	60 gr.	62 gr.	55 gr.
Ends Up	8	8	8	4	6	6	6
Speed	264 ft./min.	264 ft./min.	260 ft./min.	216 ft./min.	216 ft./min.	250 ft./min.	250 ft./min.
Sliver Delivered	54 gr.	56 gr.	55 gr.	60 gr.	60 gr.	55 gr.	55 gr.
Tester	Saco-Lowell	Saco-Lowell	Saco-Lowell	Brush	Brush		
Variation	18%—19%	18%—19%	10%—13%	14%—16%	11%—13%		
Efficiency	92%—95%	92%—95%				82%	82%
Deliveries	16	16	60	32	32	12	12
Deliveries/Operator	32	32	30	32	32	24	24
Can Size—Back	15" x 42"	15" x 42"	15" x 36"		14" x 36"		15" x 36"
Can Size—Front	15" x 42"	15" x 42"	15" x 36"	14" x 36"	14" x 36"	15" x 36"	15" x 36"
Yards/Can	3800 yds.	3875 yds.	3300 yds.	2850 yds.	2850 yds.	3500 yds.	3500 yds.
Pounds/Can	29.3 lbs.	31.0 lbs.	25.9 lbs.	24.4 lbs.	24.4 lbs.	27.5 lbs.	27.5 lbs.
Draft	7.77	7.71	8.03	8.03	6.00	6.75	6.00
Pounds/Man Hour	1250 lbs.	1270 lbs.	1105 lbs.	1070 lbs.	1070 lbs.	772 lbs.	772 lbs.



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- Sliver regularity is equal to or better than that obtained from conventional frames operated at low speeds. C.V. generally about 2.75% to 4.00%.
- Has patented automatic self-cleaning top and bottom clearers with built-in static conductors.
- Regular mill runs show an efficiency up to 93%.
- Anti-friction bearings throughout the frame.
- Proven Shaw principle drafting elements can be 3 over 4 or 4 over 5.

*VERSAMATIC DEFINED

VERSAtile . . . adaptable to all fibres, both synthetic and natural, from ¾" to 3".

autoMATIC . . . in all ways except for creeling and doffing.

Versamatic gives highest production of quality sliver by every standard — per delivery — per man hour — per square foot of floor space — per horsepower. For further information and demonstration call your nearest Saco-Lowell Office.

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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, $1.50; two years payable in advance, $2.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

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Why Use Modern Equipment?

The second *Mayflower* made it to Plymouth Rock this month clipping a week or ten days off the sailing time taken for the voyage by the original *Mayflower*. But sailing ships are still not recognized as the fastest way to cross the ocean. Mills may be running spinning frames which were built several decades ago with more efficiency than when the equipment was new but, as in the case of the sailing ship, how much faster and better could the job be done with modern machinery?

This journal is firmly convinced of the necessity of successful organizations employing modern means of manufacture and is putting up $1225.00 in prize money in a writing contest to prove the point. (See contest announcement on page 55.) There are seven divisions in the contest with a first prize of $100.00, second prize of $50.00 and third prize of $25.00 awarded in each division. In addition, other entrants will receive a complimentary five-year subscription to TEXTILE BULLETIN and a copy of the current edition of *Clark's Directory of Southern Textile Mills*.

The purpose of the contest is not to develop writers out of mill men. The articles will be judged on factual information not flowery prose. Savings in labor costs, increased production and improved quality that have been realized by the application of modern equipment will weigh heavily with the judges. About the only restraining factor set out in the rules of the contest is that the articles must be original and any article that contains statements or figures copied from another article on the same subject will be disqualified.

The contest is limited to superintendents, overseers, master mechanics and other operating personnel of Southern spinning and weaving mills and the plants that dye and/or finish the products of these mills. Mill management is urged by this journal to encourage its operating staff to enter this contest in that an assemblage of facts concerning savings, sometimes really quite phenominal, realized from recent equipment changes and improvements may do much toward stimulating planning new moves in the future.

One of the most basic fundamentals of "management thinking" is the capacity for "planning ahead." Appraisal of situations and conditions in order to determine the best direction in which to move is vital to successful management. If this contest can stimulate operating personnel in thinking of recently completed improvements into being better able to plan future improvements, then it will have done a very fine service to the management of the Southern textile industry. At the risk of being repetitous, we again urge the management of the industry to encourage its operating supervisors to enter this contest.

The divisions of the contest are organized so that every phase of textile manufacture is encompassed. If there is any doubt as to which classification a specific subject would fit, the judges will make the final decision. The judges, who have requested to remain anonymous, will be members of the Southern staff of a nationally known firm of textile industrial engineers. Contest rules stipulate that the articles must not exceed 1,000 words but this is not to say that they must be that long. The contest directors simply wanted to leave enough latitude to allow the individual to properly amplify his subject. This may be possible with 150 words or any other number, less than 1,000.

As stated in our masthead, this journal is devoted to the dissemination of information and the exchange of opinion relative to various phases of the textile industry. The editors wish to take this opportunity to wish every entrant in the contest the best of luck and say that we will be proud to publish the prize winning articles in the October issue of TEXTILE BULLETIN. August 15 is the dead-line so be sure to get your crack at the loot in the mail before then.

Back Again To The "Great White Father"

The Textile Workers Union of America's letter to Senator John McClellan asking that his Senate Rackets Committee investigate "anti-union activities" in the South, if viewed in the proper perspective, could well be called a diversionary tactic. Racketeering within union ranks, which has lately come under such a pitiless glare of publicity, has pretty well given the American public a concept of how nefarious union activities can actually be, and indeed it seems has given top union brass a case of the jitters.

So it is natural that the unions want to divert some of

TEXTILE INDUSTRY SCHEDULE

— 1957 —

Sept. 14 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Harmony Club, Columbus, Ga.

Sept. 19-20 (Th-F)—Fall meeting, **TEXTILE QUALITY CONTROL ASSOCIATION**, Barringer Hotel, Charlotte, N. C.

Sept. 20 (F)—**SOUTH CENTRAL SEC., A.A.T.C.C.**, Hotel Patton, Chattanooga, Tenn.

Sept. 27-28 (F-Sa)—**COMBED YARN SPINNERS ASSN.**, The Cloister, Sea Island, Ga.

Sept. 28 (Sa)—**PIEDMONT SEC., A.A.T.C.C.**, Hotel Barringer, Charlotte, N. C.

Sept. 28 (Sa)—Fall meeting, **TEXTILE OPERATING EXECUTIVES OF GEORGIA**, Georgia Tech, Atlanta, Ga.

Oct. 2-3 (W-Th)—**CHEMICAL FINISHING CONFERENCE** (sponsored by National Cotton Council), Hotel Statler, Washington, D. C.

Oct. 9-10 (W-Th)—Annual meeting, **NORTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

Oct. 10-11 (Th-F)—Fall meeting, **SOUTHERN TEXTILE METHODS AND STANDARDS ASSN.**, The Clemson House, Clemson, S. C.

Oct. 12 (Sa)—Fall meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES**, Thach Auditorium, Auburn, Ala.

Nov. 14-16 (Th-Sa)—National convention, **AMERICAN ASSN. of TEXTILE CHEMISTS & COLORISTS**, Hotel Statler, Boston, Mass.

Dec. 7 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Dinkler Plaza Hotel, Atlanta, Ga.

— 1958 —

Jan. 27-28 (M-Tu)—Annual meeting, **NATIONAL COTTON COUNCIL OF AMERICA, Phoenix, Ariz.**

Apr. 10-12 (Th-Sa)—Annual convention, **AMERICAN COTTON MFRS. INSTITUTE, Hollywood Beach Hotel, Hollywood, Fla.**

*Apr. 30-May 1 (W-Th)—Spring meeting, **THE FIBER SOCIETY**, The Clemson House, Clemson, S. C.

*May 19-24 (M-Sa)—**NATIONAL COTTON WEEK**, sponsored by the National Cotton Council of America.

May 26-29 (M-Th)—**NATIONAL PACKAGING CONFERENCE AND EXPOSITION (sponsored by American Management Assn.), New York Coliseum, New York City.**

June 19-21 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN., The Grove Park, Asheville, N. C.**

Oct. 6-10 (M-F)—**SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

‡Fall—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS**, Conrad Hilton Hotel, Chicago, Ill.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday; (Su) Sunday

****Listed for the first time this month. ‡Tentative listing.***

†Changed or corrected from previous issue.

DON'T
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TEXTILE BULLETIN'S
PRIZE
CONTEST
ANNOUNCEMENT
ON THE
OPPOSITE
PAGE

Read the rules carefully; Select the subject on which you are best qualified to submit an article; start gathering the facts NOW and be sure your entry is postmarked not later than midnight, August 15th.

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1. The Proved Advantages of Modern **Preparatory Equipment for Spinning:** (Opening, Blending, Carding, Drawing, Combing, or Roving)
2. The Proved Advantages of Modern **Spinning Equipment:** (Cotton, Wool or Synthetic Fibers)
3. The Proved Advantages of Modern **Preparatory Equipment for Weaving:** (Winding, Spooling, Twisting, Quilling, Warping, Slashing, or Drawing-in)
4. The Proved Advantages of Modern **Weaving Equipment.**
5. The Proved Advantages of Modern **Dyeing Equipment:** (Raw Stock Dyeing, Package Dyeing, Beam Dyeing, or Piece Dyeing)
6. The Proved Advantages of Modern **Finishing Equipment:** (Dry or Wet Finishing)
7. The Proved Advantages of Modern **Auxiliary Equipment:** (Materials Handling, Cleaning, Bobbin Cleaning and Handling, Air-Conditioning, Humidifying, Spare Parts, or Supplies)

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For the Best Article on Each Subject	$100.00
For the Second Best	50.00
For the Third Best	25.00

Other entrants will receive a complimentary five-year subscription to **Textile Bulletin** and a copy of the current edition of **Clark's Directory of Southern Textile Mills.**

Members of the Southern staff of a nationally known firm of textile industrial engineers have consented to act as judges in the contest.

CONTEST RULES

Articles must not exceed 1,000 words and must be typewritten. They will be judged on the basis of the **factual** information they contain—the savings in labor costs, increased production and improved quality that have been realized from the investment your mill has made in modern equipment, or that you know from experience **could** be realized from such an investment. Specific facts and figures will weigh heavily with the judges.

Articles must be original and any article that contains statements or figures copied from another article on the same subject will not be considered.

Prize winners will be announced and winning articles on each subject will be published in the October issue of **Textile Bulletin.** (If requested, the name of the author and/or mill will be withheld.) All articles will remain the property of Clark Publishing Company.

Entries must be postmarked not later than midnight, August 15, 1957, and each must carry the name of the author, his position and the name and address of the mill.

Contest is limited to superintendents, overseers, master mechanics and other operating personnel of Southern spinning and weaving mills and the plants that dye and/or finish the products of these mills.

Select now one of the above subjects, gather the essential facts and submit an article in this interesting contest in which every entrant will be a winner and YOUR award may be one of the cash prizes.

Address your entry to:

Contest Editor
TEXTILE BULLETIN
P. O. Box 1225
Charlotte, N. C.

the public attention in an opposite direction, if they can succeed at it. And on top of this it is almost a tradition with the unions, whenever they run squarely into the Southern independence of mind and find the going too rough to feather their nests, that they call on the Great White Father in Washington for help.

In fact, it was William Pollock, president of T.W.U.A. himself, who admitted in a public statement recently that his union can't get anywhere in the textile South without government help. But discerning Southerners, and discerning Americans, are hardly to be duped by the very boldness and audacity of the T.W.U.A.'s latest tactics. The T.W.U.A. makes a very sad mistake indeed when it assumes, so characteristically, that the stout resistence it so persistently encounters in the South—and the resistance has become very much stouter in recent times, for reasons too obvious to mention—is due to any "conniving." It is even a much sadder mistake for it to assume, as it seemingly does, the public will be credulous enough to believe all, or even a fraction, of what it alleges even approximates objectivity or, we might say, accuracy.

The union statements hint at some mysterious and sinister "conniving" on the part of forces it describes as "anti-union" and it is so ridiculous as to imply, or even say outright, that this deep dark conspiracy or "corruption" in many communities involves police officers, town officials, ministers and the general press. At times, quite naturally, one or more of these groups have had occasion to oppose some of the union tactics. Law, order and decency, after all, must be maintained.

But when the union activities run counter to these, the never-ending pattern is for the union bosses to cry "connivance" and "conspiracy" and all the other sinister-sounding words their propaganda artists can dream up. Long experience has taught most people in the South, however, to have no illusions whatsoever about the professional unionists—who, as a usual thing, the unions have been compelled to import from somewhere else, or at least from outside the South.

Perhaps the T.W.U.A. would be a little less than human if it did not squirm under the fact that in recent years it has been losing far more elections than it has been winning in the South and that currently the textile unions are down to their skinniest, despite the fantastic number of organizers they have had in the field and getting virtually nowhere at all, or as the popular saying is, getting nowhere fast. It is under such circumstances as these that the T.W.U.A. now calls for the Senate Rackets Committee to take a look at things in the textile South. Whether there's any chance or not of the Senate Committee making such an investigation, the T.W.U.A. has at least capitalized on a good publicity gimmick anyway.

The Southern textile worker—and Southerners in general, we might add—have come to weigh considerable or ample evidence at hand that makes it hard indeed to believe that the T.W.U.A. or other union bosses have their real interest at heart. There is no more realistic, or tragic, instance of this than the events which have transpired in

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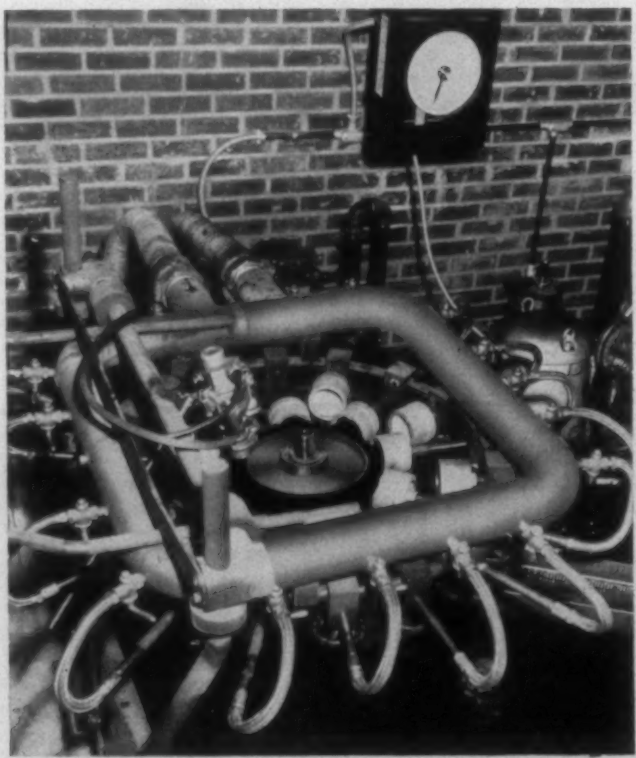

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the town of Darlington, S. C., in the course of the past year, and which caused the community to lose forever a cotton mill which had been its main industry and its principal source of manufacturing employment for nearly three-quarters of a century.

The South has always been—and has had ample reason to be—suspicious of, and allergic to, professional unionism. And it certainly goes without saying that events in recent years have caused this allergy to be considerably more severe than it has ever been before.

It is no surprise that efforts of the merged A.F.L.-C.I.O. to make a dent into heavy concentrations of the textile, lumber, furniture, tobacco and other industries in the South have been melancholy indeed. Southern organization efforts have meanwhile put a tremendous drain on the union treasuries. The unions—because Southern workers are smart enough to recognize which bolt of cloth they are cut from—faced a hard and rather drearily hopeless task to begin with, but unionization efforts in the South in the last year or so have been losing ground particularly fast because the international unions openly support racial integration as well as other ideologies incompatible to the South's way of life and its ideals.

The rank and file union members of the South, many of them members of pro-segregation organizations, simply aren't going to go along with the unions on the racial issue. The national labor union leaders have referred to a tremendous education campaign that will be necessary to change the Southern worker's way of thinking, but months later there doesn't seem much evidence it has gotten under way.

It is intriguing to speculate as to how many millions of dollars such a campaign would take—without even a slim chance of tangible result—and it would seem a pretty fair guess that something of this same sober thought may have finally penetrated to the inner councils of the international unions which first threw out the suggestion of so gaudy a scheme to "brainwash" the independent Southern worker.

But to go back, for a moment, to the Darlington case. The trial examiner finally handed down his decision which, as we see it, amounted to a victory for no one, certainly neither to the workers who were displaced nor to the city of Darlington. The examiner ruled the liquidation of Darlington Mfg. Co. constituted discrimination under the Taft-Hartley Law, but that there appeared no remedy since the plant has been sold and dismantled.

Roger Milliken, who was president of the now non-existant Darlington Mfg. Co., issued a statement saying he disagreed the company had "technically committed unfair labor practices," but adding that the ruling "specifically recognizes an employer has a right to go out of business and may not be subject to financial penalties for doing so." T.W.U.A. President Pollock has been quoted as saying the decision of the trial examiner will be appealed to the full N.L.R.B. in a further effort to get back-pay penalty awards for the workers who lost their jobs, but it is rather difficult to see where pursuing the matter further can be to anyone's advantage.

While the small cotton farmer usually hasn't the capital to invest in large and expensive machines, about one-fourth of the cotton crop in 1956 was harvested mechanically, compared with only six per cent in 1949.

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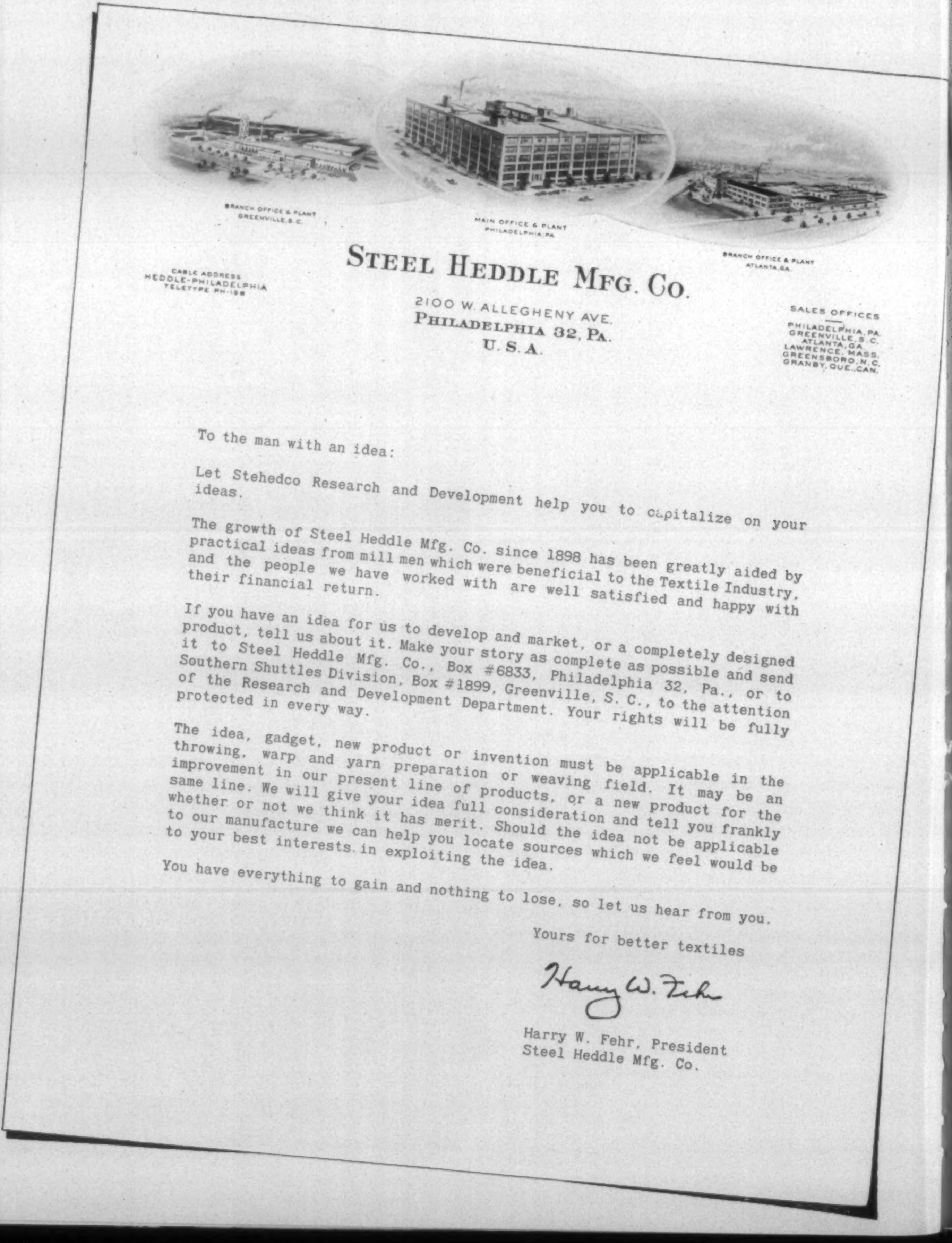
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The idea, gadget, new product or invention must be applicable in the throwing, warp and yarn preparation or weaving field. It may be an improvement in our present line of products, or a new product for the same line. We will give your idea full consideration and tell you frankly whether or not we think it has merit. Should the idea not be applicable to our manufacture we can help you locate sources which we feel would be to your best interests in exploiting the idea.

You have everything to gain and nothing to lose, so let us hear from you.

Yours for better textiles

Harry W. Fehr

Harry W. Fehr, President
Steel Heddle Mfg. Co.

textile bulletin

VOL. 83 *JUNE 1957* *NO. 6*

S.C.T.M.A.

South Carolina Manufacturers Discuss Atomic Sciences, Automation & Education

THE South Carolina Textile Manufacturers Association held its annual convention May 30 through June 1 at The Cloister, Sea Island, Ga. Highlights of the meeting were speeches by U. S. Senator George Smathers (D. Fla.); Oscar M. Bizzell, chief of the isotopes development section in the Division of Civilian Application of the Atomic Energy Commission in Washington, D. C.; and Don A. Miller of Aiken, S. C., manager of the Savannah River Plant of the A.E.C. The annual meeting of the J. E. Sirrine Textile Foundation was also held and the convention heard a report on textile traffic by Ellison S. McKissick of Alice Mfg. Co., Easley, S. C., and L. O. Kimberly Jr., of the Atlanta (Ga.) Traffic Bureau.

Sen. Smathers, who was re-elected to his second term in the U. S. Senate last year by the largest majority ever recorded in a Florida primary, told the S.C.T.M.A. members that there must be genuine reciprocity by all parties to reciprocal trade treaties and expressed concern over the "State Department theory" that U. S. industry can be manipulated to maintain the nation's policy and prestige abroad. "More of us," he said, "are wondering at the wisdom of sacrificing industry and jobs to please foreign countries." Diplomats need a thorough grounding in business principles, he said, adding, that the cornerstone of collective security is the economic well-being of the U. S.

The Senator commented that the traditionally internationally-minded South has turned more and more to a protectionist philosophy as industrialization has increased. Where Southern congressmen voted 98 per cent for foreign aid measures before World War II, last year they were only 55 per cent in favor of the mutual security and foreign aid programs. He said that this was "a consequence of this new industrialization." He predicted a continued trend to protectionism but not of the all-out Smoot-Hawley variety.

Election Of Officers

Alan B. Sibley, Judson Mills of Greenville, S. C., was elected president of the S.C.T.M.A. He succeeds Howard B. Carlisle Jr., of Lyman (S. C.) Printing & Finishing Co. P. S. Bailey, president-treasurer of Clinton Cotton Mills and Lydia Cotton Mills at Clinton, S. C., was elected vice-president of the association and thus is in line for the S.C.T.M.A. presidency in 1958-1959.

Alan B. Sibley

H. B. Carlisle

P. S. Bailey

The association re-elected three directors: W. A. L. Sibley of Monarch Mills at Union, S. C.; J. C. Self, Greenwood (S. C.) Mills; and E. R. Stall, Cone Mills Corp., Greenville, S. C. The by-laws were amended to increase the board from nine to 11 members. Named to the new directorships were: W. F. Robertson of Riegel Textile Corp., Ware Shoals, S. C., and Charles D. Green, Reeves Bros. Inc., of Spartanburg, S. C. The board re-elected John K. Cauthen of Columbia, S. C., as executive vice-president and Miss Julia Kennerly of Columbia as secretary.

Atomic Sciences

Radioisotopes hold the key to many present industrial problems including a large number in the textile industry, Oscar M. Bizzell told the convention. The textile industry is already making some practical uses of these atomic tools, he added. Use of radioisotopes is saving U. S. industry more than a third of a billion dollars a year, he said. He cited as a practical example of their use on the textile production line the detection of color migration in multicolor printing. The radioisotope, Phosphorus 32, is used as a tracer to signal the start of significant color soiling. It is added as an aqueous phosphorus solution to the predominate color of the pattern to give a predetermined level of radioactivity, the exact value being determined by the critical soiling level of the pattern, he said.

Two geiger counters are immersed at either end of the dye box containing the most sensitive color, Mr. Bizzell explained, and they record continuously to indicate the gradual invasion of the so-called pirate color. When the recorder reaches the critical limit, it automatically stops the printer. The cost factor is said to be negligible and the printed textile is soon safe for handling and distribution.

Mr. Bizzell said that other tracer applications of radioisotopes to textile problems are to: (1) show up the contacts between fibers in a sliver; (2) determine the extent to which a fabric will absorb a detergent; (3) determine the effectiveness of a detergent in various "hard" waters; (4) test the efficiency of washing equipment and techniques in removing various soils from fabrics; (5) mark individual wool fibers and study their movement in drafting; (6) observe through autoradiography the configuration of marked fibers in the sliver; (7) investigate the uniformity of oiling of nylon; (8) measure the diffusion coefficients in polymers; (9) study the thermodynamic properties of solutions at infinite dilution; and (10) study the wear of mechanical parts of textile machines.

In addition, he cited radioisotype uses for their radiation properties in gauging thickness or thinness, liquid level control, inducing chemical and physical changes and as static electricity eliminators. He pointed out that the Russians are using radioisotopes to measure irregularity of slivers, rovings and yarns of medium counts.

S.C.T.M.A. Resolution

It has been clearly demonstrated that the cotton programs of our Government have not succeeded.

Our South Carolina manufacturers consume millions of bales of cotton annually and our association is vitally concerned with any cotton program; believing that cotton is now at the crossroads.

A program geared to the reality of domestic and foreign markets must insure a high consumption of cotton in our domestic market as well as a provision for a satisfactory export market. The continuation of our current program, and the failure of our Government to face the realities of domestic and foreign markets can only mean a declining domestic use of cotton with increased use of other materials and will discourage research and promotion of cotton.

It is our belief that any cotton program aimed at achieving the proper goals must:

(1) Provide for increased acreage for the farmers, thereby enabling them to operate at maximum efficiency. With drastically reduced acreage, farmers cannot operate any more efficiently than can a mill on a three-day week.

(2) Provide for cotton to be priced competitively and on a one-price system, with whatever steps are necessary to preserve a fair return for the farmers.

(3) Permit cotton to move through normal channels of trade and not through the Government loan. Any moving in and out only adds to the over-all inefficiency of trading and unnecessarily increases the price of cotton to our mills.

(4) Prevent the dumping of Government surpluses abroad, which creates unfair competition for our domestic mills both in our domestic and our export markets.

(5) Provide an accelerated program for market research both in the production of the crop and in the marketing of the finished product.

Automation

Don A. Miller told the convention that the A.E.C.'s Savannah River plant was a prime example of automation. He said that an effect of automation is the need for more workers to keep the equipment "in line" than to operate it. "You need fewer production people with automation, but maintenance men must be higher skilled and there are more of them," he said. Pointing out that the plant employs 8,000 persons, Mr. Miller said that the labor turnover rate is 0.6 per cent against a national industrial average of 3.3 per cent. The injury rate of the plant is 0.6 per million man-hours against the national chemical industry rate of 3.21.

Education Aids

The textile mills must raise their sights on starting salaries for college graduates joining their organizations according to George P. McClenaghan, vice-president of J. P. Stevens & Co. He reported as chairman of the S.C.T.M.A. liaison committee working to increase enrollment at the Clemson College school of textiles. He said that the downward trend in textile enrollment at the school has been reversed and 89 freshmen will be taking textiles this Fall against 79 last Fall. More substantial increases are expected in 1958. He said the association board, on recommendation of his committee, has approved a scholarship program to be financed by the association but to be awarded by Clemson on the basis of high school record, leadership, need and competitive examination. The scholarships will be $500 per year, beginning with one in 1957, two in 1958, three in 1959 and four in 1960.

Mr. McClenaghan said that enrollment has been dropping at all textile schools. He pointed out that the 1955-1956 enrollment of all major Southern textile schools was 1,329, which is only 60 per cent of capacity. He said that Clemson had only 39 per cent of its 850 capacity enrolled. Probable reasons for this are the pessimism with which we ourselves are prone to describe our business and the low starting salaries which the industry is paying in comparison with other engineering fields. He cited comparisons for 1957 graduates, lowest and highest offers of: at Auburn, $390 for textile, $460 for electrical; at Clemson, $390 for textile, $455 for electrical; at North Carolina State, $362 for textile, $460 for electrical; at Georgia Tech, $400 for textile, $600 for chemical and electrical. "If we want to continue to induct into our businesses trained men of high caliber," Mr. McClenaghan continued, "we must raise our sights on starting salaries so they will be more in line with other industries and professions. I know full well the argument that immediately comes to the forefront of our minds when we think along this line; namely, that the wage scale of our entire supervisory staff would be upset. Gentlemen, perhaps it is high time it is upset."

Traffic Committee

Estimated savings of approximately $2 million annually in delivered costs of cotton and other inbound materials to South Carolina textile mills were cited in the annual report of the traffic committee to the S.C.M.T.A. The report came from Ellison S. McKissick and L. O. Kimberly Jr. The committee noted a reduction of approximately 30 cents a bale was made effective May 24, 1956, by eliminating the six per cent general increase which the Interstate Commerce Commission had authorized from the Mississippi Valley to South Carolina mill points. Effective Oct. 8, 1956, another reduction of approximately 25 cents per bale was established from the portion of the Southwest near the Mississippi River in Missouri, Arkansas and Louisiana. "Considering the shipping points in the Southwest and Mississippi Valley as a whole, the reductions during the year to your mill points have averaged at least $1 per bale on an annual movement of approximately two million bales," the report said.

Golf Tournament

John B. Harris Jr., Greenwood (S. C.) Mills, shot low gross and T. I. Dashiell, Spartan Mills of Spartanburg and J. M. Bailey, Judson Mills, Greenville, tied for low net in the golf tournament. The tournament was directed by Mr. Harris and prizes were presented by C. D. Green, Reeves Bros., Spartanburg.

Scores, with gross, Calloway handicap and net in that order, were: Mr. Harris, 77-5-72; Mr. Dashiell, 81-9-72; Mr. Bailey, 106-34-72; N. G. Hardie, Chicopee Mfg. Co., Walhalla, 99-21-78; Aubrey Marshall, Wellington Mills, Anderson, 90-15-75; E. B. Rice, Blair Mills, Belton, 88-15-73; J. R. Swetenberg, Wellington Mills, Anderson, 85-11-74; H. W. Close, Springs Cotton Mills, Lancaster, 104-26-78; W. W. Gayle, Springs Cotton Mills, Lancaster, 91-18-73; J. L. Hallett, Springs Cotton Mills, Lancaster, 91-16-75; and L. Garrity, Celanese Corp., Charlotte, N. C., 91-17-74.

New President

Alan B. Sibley, the new president of the association, has been active as a textile executive in South Carolina for more than 20 years. He is presently in charge of 11 mills which produce synthetic, worsted and blended cotton fabrics for Deering, Milliken & Co. Inc. Mr. Sibley entered the textile business in 1929 as a cost accountant at Laurens (S. C.) Mills. He had been graduated four years earlier with a B. S. degree in textile engineering at Georgia Tech. In 1934, Mr. Sibley became superintendent at the Darlington Mfg. Co. and in 1937 he also became superintendent of Hartsville Cotton Mills. In 1938 he became vice-president and treasurer of Judson Mills where he still maintains his office. Since that time the additional mills have been put in his charge. Many of them have been constructed under Mr. Sibley's direction.

Mr. Sibley is married to the former Miss Winston Elizabeth Hall of Miami. He is an elder of Westminster Presbyterian Church, a director of the Peoples National Bank, a member of the South Carolina advisory board of the Liberty Mutual Insurance Co., a director of the Piedmont and Northern Railroad, a director of the Franklin National Life Insurance Co., a past president of the Greenville Rotary Club, and a past chairman of the Community Chest Campaign.

A Must For Every Mill:

Supervisory Co-Operation

By ED GOULD, Personnel Director, Pacific Mills, Halifax, Va.

The following paper was presented by Mr. Gould before the Spring meeting of the Piedmont Division of the Southern Textile Association at Hickory, N. C.

NO overseer or second hand can manage his department with full success unless he has the co-operation of practically every other supervisor in the organization. It is also true that the way one supervisor runs his department influences the results of almost every other supervisor's department. Each man influences the work in many departments besides his own. The entire group of supervisors in an organization are more or less dependent upon the action, the attitude and the efficiency of each individual supervisor.

We have learned since the very beginning of history that nothing worth while can be accomplished without the united effort of everyone concerned. Our history books keep alive the observation of Benjamin Franklin, who said at the time the Declaration of Independence was signed: "We must all hang together or we shall all hang separately."

A new and more modern example of close co-operation can be had by conducting a simple experiment. We know that wood will float. While it is true that wood will float, sawdust will sink to the bottom. This means that anything we may try to accomplish through our individual efforts will probably end in a complete loss of our time and whatever else we put into it. However, if we unite into a solid group, we can then float upon the water instead of sinking to the bottom.

Co-Operation Between Supervisors

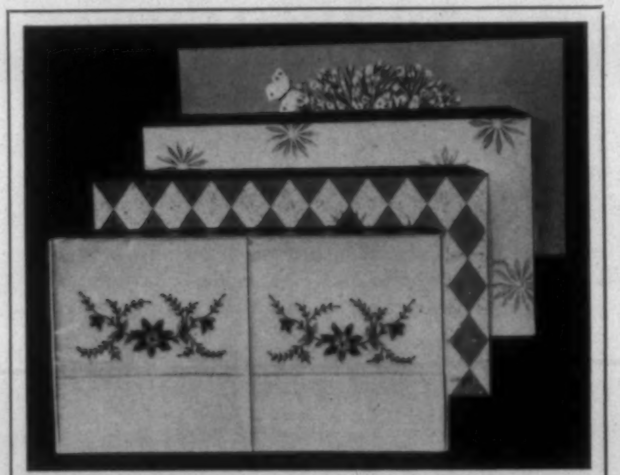
The nature of business makes the interdependence of supervision greater in some organizations than in others. In textiles, the interdependence between departments is very great and necessitates a very close co-operation. In practically no industry, however, is it possible for a supervisor to manage his department entirely independent of other supervisors. No matter how well the supervisor has his own department organized, it is still possible for lack of co-operation from other supervisors to render his own department practically helpless to achieve expected results.

There is a remarkable difference between the plant organization in which the supervisors co-operate closely with one another and the plant organization in which each supervisor is pulling selfishly in his own direction regardless of how his actions may affect others. The sum-total efficiency of a plant can be no greater than the efficiency of the individual departments of which it is composed.

Just consider your own organization for a moment. Take time to list the supervisors in your own organization upon whom the fullest efficiency in your department depends directly or indirectly. You will probably be surprised to discover, upon careful analysis, that practically every supervisor in your organization either directly or indirectly affects you and your work. Then go a step further and list the other supervisors in your organization who depend either directly or indirectly on yourself for the results they obtain in their departments. Here, again, you will probably be surprised to know how many supervisors are being influenced by you and your performance.

The more successful the organization as a whole, the more opportunities there will be for each individual supervisor in that organization. Every supervisor has an opportunity to make a better individual showing in an organization in which all the supervisors are co-operating with each other. An otherwise competent supervisor may fail if he is unable to get along with his fellow supervisors. As a matter of fact, one of the most important qualifications of a good foreman is the ability to work well with people.

Most friction between people is the result of a lack of understanding, which reminds me of a story. It was a blistering hot day in North Carolina late in May. The teacher in a class had called on a student to read aloud a brief paragraph from an essay. This he did, laboriously. When he finished, the teacher asked him to comment on the passage which he had just read. His earnest reply brought even the sleepiest students to a hilarious awakening. For he said: "I am sorry, sir, but I wasn't listening."



RIEGEL TEXTILE CORP. has adopted colorful gift boxes in the merchandising of its pillow case sets. The company's white Worth assortment is sold in a pink box featuring a single green and white floral spray. Riegel cases in white, vat pastels or white with vat pastel borders have a white container with a sprinkling of pink and blue daisies. For white DeLuxe cases with vat pastel borders, a box with blue and white harlequin motif and three geometric flowers in chartreuse has been created. The bottoms of the containers are entirely overwrapped with Mylar, leaving the merchandise visible for counter display and customer inspection. The boxes were designed and are being manufactured for Riegel by Container Corp. of America.

Understanding People

Even though we listen, we are always suspicious of strangers we do not know and cannot understand. One of the fundamental reasons for hostility between nations is the fact that people of different tongues, different customs and different backgrounds find it difficult to understand each other.

The first principle that a supervisor should follow in getting along with other supervisors is to make it his business to establish a sound basis of understanding with them. This pre-supposes that a supervisor will take an open-minded attitude and will conscientiously endeavor to understand the other supervisor's viewpoint. In order to do this he has necessarily to put himself, without prejudice, in the other supervisor's place and endeavor to look at the situation from the other supervisor's point of view.

Not only should a supervisor take the responsibility for trying to understand the other supervisor, but he should also make it as easy as possible for the other supervisor to understand him. He should be perfectly willing to put forth his own viewpoints and ideas and to go to any reasonable limit in making himself understood by his fellow supervisors. The more guesswork that can be taken out of the relationship between supervision, the more effective the mutual results will be.

Friction between supervisors often develops because there is overlapping of their functions, and some jealousy arises as to the respective jurisdiction of each. Frequently such a condition is the fault of the higher executives who assign responsibility to supervision. Unless the supervisors in an organization are all working with a clear understanding as to where the boundaries of their jurisdiction lie, misunderstandings and antagonisms are certain to develop.

The supervisor who feels that another supervisor is encroaching upon his functions or rights should lose no time in securing a definition of boundaries of the other supervisor's jurisdiction and his own. He can do this either by going in a straightforward manner to the other supervisor and talking over the situation with him or by asking the executive above to define the boundaries between himself and other supervisors. Usually it is desirable that the supervisors should come together themselves and discuss the matter before either of them appeals to higher authority. Appealing to higher authority may cause misunderstanding.

Behind-The-Back Criticism

The surest way for a supervisor to make himself a target for the destructive criticism of other supervisors in the organization is to start criticizing other supervisors himself. Criticism uttered behind the back of the other supervisor is almost certain to reach his ears sooner or later. The natural method for him to use in retaliating is to indulge in even more severe criticism of his criticizer.

Destructive criticism of other supervisors stirs up bad feeling and antagonism. Even though criticism may be intended to be constructive, unless it is delivered to the supervisor concerned himself he is likely to interpret it as destructive criticism. A good rule to follow is to talk to the other supervisor, not about him.

Every man loves a "straight shooter." This is just as true in relationships between supervisors as between any other people. The supervisor who plays squarely with the other supervisors of his organization need not worry about being criticized by them very severely. His relationships with other supervisors will be made most pleasant and profitable by adopting a policy of refraining from criticizing them himself and by playing the game squarely at all times.

Passing The Buck

One of the greatest problems that we face today in supervisory co-operation is that of "buck passing" or "passing the buck." Although there is an old precept that urges us to return good for evil, nevertheless this is not a practice which is very universally followed. We are still living in a civilization in which evil is likely to be returned for evil, in which the theory of "an eye for an eye and a tooth for a tooth" is pretty generally adhered to. Conseqeuntly, the supervisor can expect that his fellow supervisors will hand him about the same treatment as he gives them.

The old game of "buck passing" spreads rapidly in an organization once it gets started. If a supervisor shifts blame to some other supervisor, that other supervisor, realizing the injustice of the situation, is all the more determined to get even with the supervisor who played the trick on him. He seizes the very first opportunity to retaliate, and when he does he probably gives good measure. About that time warfare between them commences in earnest.

Some organizations are honeycombed with the "buck passing" habit. Once it gets to be general practice in organizations it is very difficult to uproot. Each supervisor feels that the other supervisor is trying to hang something on him. He gets on his guard, and probably spends a good share of his time developing counter measures against those who passed the buck to him. It is unfortunate when the supervisor of an organization gets into the habit of "crawling out" and shifting the blame to others.

A suggested solution to overcome "buck passing" is that, when a fellow supervisor has passed the buck, you will be wiser if, instead of laying for an opportunity to get even, you will go directly to the supervisor who is guilty and talk it out with him. If the other supervisor realizes that he cannot "get away" with such tactics, he will not be inclined to repeat.

A frank and open discussion between the two men concerned can often times stop buck-passing before it reaches any serious proportion. The "eye for an eye and tooth for a tooth" theory does not make for harmony between supervisors.

Passing Defective Work

Another common bone of contention between supervisors that is closely connected to "buck-passing" is the result of passing defective work from one department to another. The supervisor may have the best of intentions, but due to lack of proper control of his departmental organization a certain amount of defective workmanship may get by. He may not be intentionally passing defective work on to the next supervisor, but he has failed to organize his department in such a manner that such passing of defective workmanship will be impossible.

Regardless of the causes for passing defective work to the next man, the fact remains that it is the grounds for

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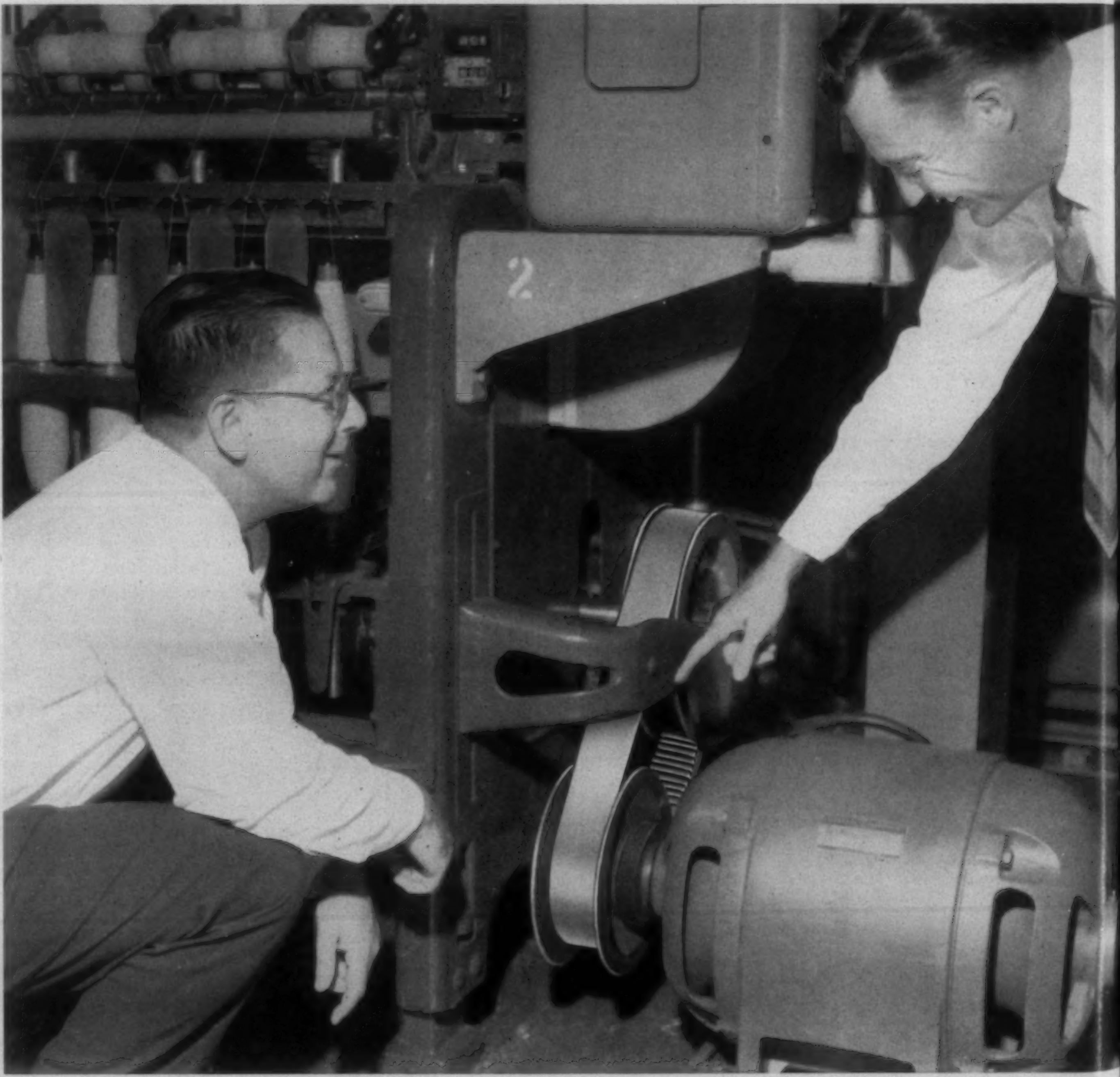

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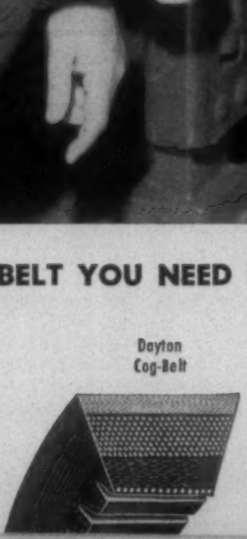

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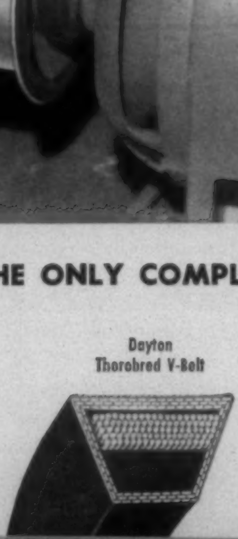

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Installation of individual motors and Dayton Variable Speed Drive Assemblies was begun in April, 1956 on 93 new spinning frames. At the same time 23 older model frames were similarly equipped.

To change cylinder speeds on former equipment the sheave on each V-Belt drive had to be replaced with another of different size to get the desired ratio. Mill Superintendent estimated total time to change each sheave at one man hour.

With the new Dayton Assemblies time has been reduced to ten minutes per frame. Never has fretting corrosion caused difficult adjustment.

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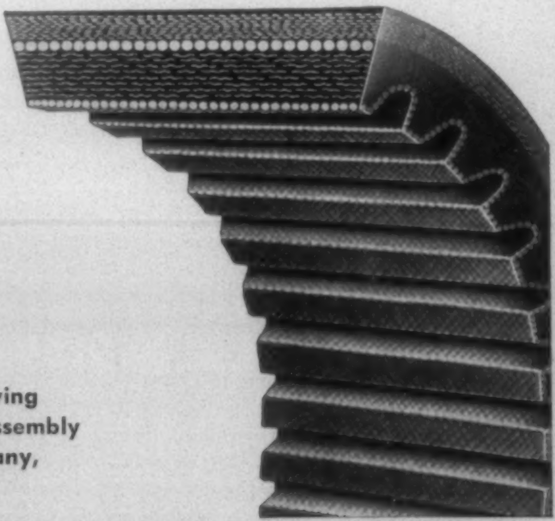

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bad feeling and lack of co-operation. The supervisor who is desirous of getting along well with other supervisors must be particularly careful to see that the work he passes on to the next department is properly done.

If a supervisor has to go to extra work to make up for the carelessness of the supervisor who did the preceding operation he will be very much annoyed. The weaving man who gets bad work from the preparation section will generally send it back to the preparatory supervisor, for he knows that it will run bad in his looms. The preparatory supervisor who gets bad yarn from the yarn department will complain loud and long and perhaps return it. This can happen all through a mill, disrupting the whole organization and spoiling the teamwork that is necessary for success.

In addition to the supervisor's desire to turn out work that is 100 per cent right, because poor workmanship unfavorably affects customers, he should also keep in mind the unfavorable effect of poor workmanship upon the disposition of the next supervisor, whose department must correct mistakes already made.

Admitting Mistakes

One of the greatest accomplishments a supervisor can make is to develop the willingness to admit mistakes. Even in this very scientifc age of human dynamics, advance thinkers and supposedly the ultimate in human-relations concepts, it is still a rare thing to meet a man who is willing to admit that he has made a mistake and who will take the full responsibility for his mistakes and the mistakes of his subordinates. It is something that most of us cannot bring ourselves to do even though we know we should. Some of the worst supervisors I have known have been men who simply would not accept the responsibility for a mistake. They would go to any end to discover some excuse for shifting the blame to someone else. They were not aware of the fact that half of the reprimand for making a mistake is dissolved by the action of a man who comes back frankly and admits his error.

It seems strange that so many people are afraid that they will be condemned for mistakes. As a matter of fact, a person will be condemned much quicker for making a mistake and trying to cover it up than he will for frankly admitting it and setting constructively to remedy the situation and to prevent the re-occurrence of a similar mistake. No supervisor can be 100 per cent right all of the time. The only man who does not make mistakes, it is said, is the man who does nothing.

The foreman who hopes to get along well with his fellow supervisors must be ready to admit mistakes. If he always rushes to the defense of his mistakes, regardless of how conclusive the evidence against him may be, he will become very unpopular. Nobody likes a person who assumes that he is always right and stubbornly defends his position even against the most reliable evidence.

Some supervisors refuse to admit mistakes on the part of anyone in their departments. Insofar as this is evidence of loyalty on the part of the supervisor to his subordinates, such a policy may be commendable in a supervisor. The mistake which such a supervisor makes, however, is that he does not admit that his department has made a mistake and take the responsibility for it himself. The he can turn to whoever in his department is responsible and come to an understanding with that person and prevent the possibility of a repetition. It is very annoying to other supervisors when one supervisor stubbornly maintains the position that he and his department can do no wrong.

Open To Suggestions

There is another sure-fire method of developing co-operation between supervisors and between departments, and that is through an open-mindedness to suggestions. Do you invite suggestions from other supervisors from time to time in order to gain the advantage of their perspective on your job? When other supervisors offer suggestions, do you accept them willingly and with an expression of appreciation? When suggestions are made by other supervisors, do you take the attitude that they are made in criticism of you and your methods, or do you give them the benefit of the doubt and assume that the suggestions are made constructively?

I have known several supervisors who have been particularly successful in managing their departments and in getting the enthusiastic co-operation of other supervisors whose work was closely related to theirs. I asked one once why he was so successful in winning co-operation, and he replied: "I always have made it a point to invite suggestions from those other supervisors concerning problems of my own department, particularly when these problems were in any way related to them and their departments. Then I always managed somehow to incorporate their suggestions in my plans. The result was that each of these other supervisors feels that he has an interest in seeing the work in my department succeed."

Many times a supervisor whose work is closely connected to that of another can see ways in which the other supervisor's work can be very much simplified. If that other supervisor has always maintained an open-minded attitude, undoubtedly your suggestion will be made to him incorporating the improved idea. However, if he has shown in the past that he does not welcome suggestions and does not open his mind to receive them, it is certain that the suggestions will not be made to him. Consequently, he loses out on the possibilities of improving the performance in his department.

We have already suggested a number of things which make it difficult for a supervisor to get along with other supervisors in the mill. The supervisor who is unwilling to accept suggestions has a difficult time. The supervisor who refuses to admit mistakes is not liked. The "buck-passer" reaps the harvest of retaliation. The man who is destructively critical and talks behind the other supervisor's back builds up a wall of antagonism against himself.

There are certain human characteristics that hinder and prevent co-operation between supervisors. Jealousy, distrust, prejudice, selfishness and stubbornness all help to make a supervisor unpopular with his associates. One of the bad mistakes of many supervisors is the assumption that so long as they attend to business in their own department they can succeed regardless of the attitude of other supervisors. As a matter of fact, this policy of tending to one's own business is very worth while in avoiding misunderstanding and friction with other supervisors. It is not to be assumed, however, that a supervisor can be fully successful unless he has the good will and the co-operation of the supervisors with whom he has to deal.

Stealing Credit

Occasionally we come across a supervisor who tries to steal credit from other supervisors for results accomplished in the plant. Even though such a man feels he is winning credit for himself by such tactics, the fact is that his acts are certain to arouse the antagonism of other supervisors. In the long run he will lose out by such action. No supervisor can afford to do anything which will jeapordize his standing with his fellow supervisors.

Employee Raiding

There is one more point that I would like to touch on before we summarize and that is the non-interference with the other supervisor's men. Bitter controversies have been created between supervisors simply because one supervisor made overtures to employees in the other's department to induce them to seek a transfer. In some plants it has even occurred that a man would quit his job and a day or two later the supervisor whom he left would see him at work in the department of another supervisor in the plant. Most mills have rules which make it impossible for such a thing to happen. It is possible, however, to get around rules in some way or another if a supervisor is unethical enough in his relations with other supervisors to want to steal an extra good man away from another department.

Supervisors should be close enough together so that they can discuss a situation such as this frankly and come to a clear understanding. After discussing the problem, they can mutually agree on an interdepartmental transfer if possible. Also, where one department may have too many employees and another may be needing a few, a close spirit of co-operation can arrange for the transfer of these people from one department to another, working out to everyone's satisfaction.

A supervisor also should refrain from giving orders or directions in another supervisor's department, which is another form of interference. This upsets the employee groups as well as the supervision of the other department, as well as generally getting things confused and not accomplishing anything at all. This happens more often than we realize, for in talking to employees we hear this mentioned quite often as one of their sources of dissatisfaction. The work force in one department should be given their directions by that departmental supervisor and not by some supervisor from another department. This is fundamental, but it is amazing how often it seems to be ignored.

Co-Operation Wins Co-Operation

To summarize, I should like to say that co-operation wins co-operation. As a supervisor, you can expect just about as much co-operation from the other supervisors as you give them. Co-operation is not a one-sided matter. There is a limit as to how far one supervisor will go in co-operating with another unless the other supervisor reciprocates. We get pleasure doing things for people who appreciate us and who we know will be just as ready to return favors. There is a limit to our patience, however, when an individual is all ready to receive but never offers to give.

It is always wise to give the other supervisor the benefit of the doubt and to take the initiative yourself in opening up contacts with him which will result in closer co-

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operation. If each waits for the other, co-operation may be forever lacking. It is up to one or the other to make the move. Usually, it is the supervisor who is the bigger of the two who makes the first move.

The key to getting along with other supervisors is to treat them just as you expect them to treat you. Upon this basis, how much co-operation do you feel that you deserve at the hands of other supervision in your organization?

The ability to get along with people is a prime requisite of any person who expects to be successful. It is especially important in a supervisor. As the manager of a business within a business, the supervisor has an obligation to put first things first. The first requirement of successful operation of his business is the ability to get along with people—the people under his supervision, the people in charge of other departments and those executives above him who are looking to him for results.

S.T.A. Members Hear

A Review Of The 1956 Cotton Crop

Two representatives from the U. S. Department of Agriculture discuss last year's crop and predict what the trends will be for future crops. The discussion was a feature of the Spring meeting of the Eastern Carolina Division of the Southern Textile Association.

MILL men attending the Spring meeting of the Southern Textile Association at Raleigh, N. C., heard W. Glenn Tussey, field representative of the Agricultural Marketing Service, and A. M. Hodgkins, U. S. Department of Agriculture cotton examiners, report on the quality of the 1956 cotton crop and give a brief forecast of this year's crop.

It was pointed out that the U. S. Department of Agriculture has been collecting statistics on cotton since 1927. In collection of these figures, each cotton-producing state is divided into districts and representative gins are selected in each district. Consideration is given to the gin population of each state, the equipment of the gin, the variety of cotton and other factors.

These statistics from past years have shown that staple length of cotton has increased. During the last 30 years cotton shorter than one-inch has declined from three-fourths of the crop to one-fourth of the crop. Cotton of from one-inch to 1-3/32-inches has increased from one-fourth of the crop to three-fourths. Long-staple upland cotton, 1-1/8 inches and longer, has declined from six per cent of the crop to three per cent.

The reason for this change was described as being a response to a demand. The mills wanted longer staple length and would pay a premium for it. So, the plant breeders produced the longer-staple varieties and the farmers grew them.

In order for farmers to receive cotton-marketing service they had to form cotton-improvement associations and they had to grow one variety of cotton. As a result of this, in North Carolina about 97 per cent of all the cotton is of one variety. About 80 per cent of all the cotton grown in the U. S. is of six or seven varieties. Many short-staple varieties have been eliminated. The bulk of the 1956 crop is from one to 1-3/32-inches staple length, with most of that being 1-1/32-inch and 1-1/16-inch, Mr. Tussey said.

The grades of cotton in past years have seen strict low middling and low middling increase and good middling and strict middling decrease. Mr. Hodgkins said that demand also caused this change. Farmers have found it less profitable to produce the higher grades than to produce the lower grades. Last year the difference between strict middling and good middling was $3.25 per bale, he said. "The difference between good middling and middling was $1.35 per bale," he continued, "so you see the farmer could not go to the extra expense of producing good middling or strict middling—not for the extra money he would get out of it."

It was pointed out that by far the largest volume grade produced in the 1956 crop was middling. The next largest volume grade was strict low middling which was followed by the lower grades. One factor in this situation, Mr. Hodgkins said, is the preparation of the cotton. Over the years the ginning of cotton has been improved. The percentage of rough-preparation cotton has been declining until this year it is only about one per cent, whereas it used to be about six or seven per cent.

Plus factors mentioned in respect to future cotton crops were: improved picking machinery; improved weed control; improved defoliation, so that the cotton will all open at one time and can be taken from the fields faster; and improved ginning machinery. Minus factors stated for future were: smaller percentage of hand-picked cotton by family labor; and the narrowing of the premiums for higher grades will lessen the demand for them and not as much will be produced. Weighing these factors, Mr. Tussey said, "we can expect less cotton to be produced in in the high-grade category and more cotton in the low middling, strict low middling and middling range. Also, I think that," he continued, "with the improvement of our staple lengths we shall produce less of our short staple and less of the 1-1/8-inch staple and more one and 1-1/16-inch staple."

Discussion

Mr. A: I should like to have the term "rough preparation" defined.

Mr. Hodgkins: Rough preparation relates to the smoothness with which the cotton goes through the gin.

Question: Last season was a bad one, wasn't it?

Mr. Tussey: We have had two bad seasons. Everyone wants to get the first bale to the gin. Consequently, the cotton is picked when it is green or wet and the quality is not as good.

Question: In collecting the samples of cotton to determine the quality of the crop, do you know how many of the gins, from which the samples come, use dryers?

Mr. Tussey: Yes, we have a selective system to determine the number of gins to supply samples. First of all, we know how many gins in the state have dryers. Suppose, for example, the number is about 20 per cent. We would then select 20 per cent of the gins that have dryers for samplings.

Question: Do you know the amount of heat that the ginner puts on in ginning cotton?

Mr. Tussey: We have no way of knowing that. The ginner may use more or less heat or no heat at all depending on the cotton and its condition.

Question: Isn't it true that mechanical picking has brought the grade down? Isn't world competition for cotton in these lower grades and in order to meet world-wide competition we have to use lower grades?

Mr. Tussey: I think the demand for any commodity, whether it is cotton or potatoes is expressed in the prices that people are willing to pay for that commodity. The premiums paid for this high-grade cotton have declined through the years. The premium offered for good middling cotton 30 years ago was much higher than the premium paid now. That is why the demand has decreased.

Question: Is it not a fact that mechanical picking has produced a lower grade?

Mr. Tussey: Yes, but let me put it this way. Mechanical picking produces a lower grade but the premium for higher grades is not sufficient to warrant their production.

Question: Doesn't the trend in breaking strength follow the trend in improvement of the fiber?

Mr. Tussey: I think you are right. The department has been collecting statistics on breaking strength since 1946.

Question: How does middling cotton today compare with middling cotton some years ago?

Mr. Hodgkins: I think everyone will agree that the trend has been downward. The revised standards each year have been downward.

Mr. Tussey: I believe you told me the other day that the standard now is a little more flat white rather than creamy color.

Mr. Hodgkins: That is true.

Question: Is the ginner trying to please the farmer rather than the mill man?

Mr. Tussey: The farmer is right there with him, and the mill man seems a long way off. The only way the mill man can discourage this sort of thing is by paying less for the cotton. The trouble is that sometimes he has paid for the cotton before he knows anything about it.

Dun & Bradstreet Study

A Look At 1956 Plant Failures

By JAMES J. ETRO, Dun & Bradstreet Inc., New York, N. Y.

BUSINESS activity in the United States was at record levels during 1956. Yet—during this same period of unprecedented economic growth in all phases of business—failure figures were on the increase. These increases were reflected in a recent study of Dun & Bradstreet Inc., which showed that during 1956, 48 out of every 10,000 operating concerns throughout the United States failed as compared to the 42 per 10,000 rate for 1955.

Why should this be so? Some may answer with the widespread notion that failures are caused by business conditions. However, while it is true that general business conditions play their part in most failures, and that failures are one of the indicators of business conditions, the fact remains that the 9,952 businesses that *did not* fail in 1956 operated within the framework of the same general business as the 48 per 10,000 that did fail.

Others may answer that a business failure is caused by poor location or inadequate sales or heavy inventory or the rising costs of doing business. However, these are operating problems which every business and every businessman experience. They are not the causes of a business failure, but the factors which influence the success or failure of a business operation.

What then is the cause of a business failure? Through the years, one pattern has consistently recurred in Dun & Bradstreet's studies into the causes of bankruptcies involving losses to creditors. A failure can be traced in most instances to a clearly identifiable human weakness on the part of the people running the business. This human failure may be in judgement, personality, decision or know-how.

In its studies of the causes of failures, Dun & Bradstreet tries to get to the basic cause of each failure. To ascertain why the business failed, the Dun & Bradstreet reporter makes a final investigation of the account when the failure is reported. During this final investigation, the reporter will interview, whenever possible, a principal of the business. In addition, investigations are made with banks, suppliers and other outside sources to help form an objective opinion to the failure cause.

The number of spinning, weaving and fabric finishing plants that failed in 1956 is too small in itself to break down separately, but the study of the causes of failures among all manufacturers will indicate danger signals that spinning, weaving and fabric finishing plant operators may use to check their operations. This is the study of the causes of failures, including spinning, weaving and fabric finishing plants, for the year 1956, that Dun & Bradstreet recently did.

(1) *Disaster*—41 or 1.8 per cent of these failures were attributed to disaster caused by fire, flood, burglary, employees' fraud or strikes. Even if you say that these failures were caused by circumstances beyond human control, they probably could have been provided against through proper insurance.

(2) *Fraud*—Another 45 or 2.0 per cent of the failures were resultant from fraud or fraudulent intent on the part of the principal. This was reflected by irregular disposal of assets (1.4 per cent), false financial statement (0.3 per cent), premeditated overbuy (0.1 per cent) and 0.2 per cent for other reasons which belong under the classification of fraud.

(3) *Neglect*—A somewhat larger, but still small, per-

centage of the manufacturing businesses that failed in 1956 was classified as due to neglect. The apparent cause of neglect in 2.1 per cent of the cases was poor health. Bad habits caused neglect in 0.5 per cent of the cases, and marital difficulties another 0.3 per cent. As a whole, neglect as a cause of failure added up to 3.1 per cent or 72 of all manufacturing failures in 1956.

(4) *Inexperience*—The bulk of the manufacturing failures, 92.7 per cent (or more than nine out of ten) appeared to be management failures. This is how the category looked.

	Number	*Per cent*
Incompetence	1,202	52.6
Unbalanced Experience	363	15.9
Lack of Managerial Experience	331	14.5
Lack of Experience in the Line	221	9.7

This group was further analyzed by the surface causes, or the reasons given as excuses, for failure. More than one-half (54.5 per cent) of the manufacturers in the group who failed said it was because their sales were inadequate (sales management). And another 14.9 per cent blamed tough competition (general management) for their own difficulties. Some 11.8 per cent said it was because they couldn't collect the money owed them (credit management) and another 9.1 per cent said their hands were tied by excessive fixed assets (again general management). Another 8.8 per cent blamed their failure on heavy operating costs (financial management) and 7.2 per cent said it was inventory burden (general management) that forced them out of business. A few, 0.5 per cent, said their trouble was poor location. Because some failures are attributed to a combination of apparent causes, these figures add up to somewhat more than 92.7 per cent of the failures analyzed.

And now let us look at the general failure picture in 1956.

PERCENTAGE CHANGE 1955-1956

	Number	*Liabilities*
Total Businesses, All Lines	+16	+25
Total Manufacturing	+ 4	+22
Manufacturing of Textiles & Apparel	+ 6	+36

The above is not a happy picture and it would be consoling to say that this upward trend did not carry over into the failure statistics for spinning, weaving and fabric finishing plants. However, during 1956, 40 spinning, weaving and fabric finishing plants failed with a total loss to creditors of $6,931,000. Percentagewise, this represented an increase of 48 per cent in numbers as compared to 1955's reported 27 failures and an increase of 189 per cent in creditors' liabilities as compared to 1955's reported $2,397,000. The average liability for each spinning, weaving and fabric finishing plant that failed in 1956 was $173,275.

It should be pointed out that Dun & Bradstreet's failure statistics include only spinning, weaving and fabric finishing plants which failed with losses to creditors. Not included in the tabulations are voluntary retirements from business, transfers of ownership, and those spinning, weaving and fabric finishing plants who closed their doors owing no bills. Therefore, those who failed in 1956 are not necessarily the only ones who ceased operations—but they are the ones that did so at the expense of someone else.

FAILURES OF SPINNING, WEAVING AND FABRIC FINISHING PLANTS

1940-1956

Year	*Number*	*Liabilities*
1940	78	$3,341,000
1941	23	579,000
1942	19	1,019,000
1943	4	1,257,000
1944	3	73,000
1945	2	93,000
1946	1	6,000
1947	11	1,245,000
1948	11	2,107,000
1949	40	5,086,000
1950	38	2,600,000
1951	28	1,442,000
1952	39	4,079,000
1953	47	7,082,000
1954	65	5,747,000
1955	27	2,397,000
1956	40	6,931,000

Source: Dun & Bradstreet Inc. This record includes those businesses that ceased operations following assignment or bankruptcy; ceased with loss to creditors after such actions as executions, foreclosure, or attachment; voluntarily withdrew leaving unpaid obligations; were involved in court actions such as receivership, reorganization, or arrangement; or voluntarily compromised with creditors.

Although it is no part of Dun & Bradstreet's function to predict the future, it is reasonably safe to say that 1957 will bring to spinning, weaving and fabric finishing plants, problems to be solved and challenges to be met. A good look at himself and his business never did any businessman harm, and if the underlying causes of failure in 1956 suggest areas of change or investigation, all well and good.

The year 1956 was a good year and experts are optimistic over 1957. No matter what the year brings there is always room for the spinning, weaving and fabric finishing plant operator who knows what he is doing and how to do it. Service, quality and the right location may make the initial profits, but it takes sound management policies and practices to hold on to these profits and to build the business.

Clemson Announces Gin Engineering Program

An instructional program in gin engineering at Clemson College has been announced by President R. F. Poole. The program, first of its kind in the U. S., has been developed by the School of Agriculture in co-operation with the National Cotton Council. Present plans call for inauguration of the new instruction in September, with courses to be offered at both the undergraduate and graduate level.

The Foundation for Cotton Research and Education, Memphis, Tenn., will provide a limited number of graduate fellowships, the recipients to be selected nationally by the foundation and approved by the Clemson graduate school. Some financial support for the program will be received from the cotton industry and gin machinery manufacturers through the foundation. An agreement has been signed by Wm. Rhea Blake, executive vice-president and secretary of the foundation and Dr. Poole.

Students who enroll in gin engineering will receive training in engineering and other subjects with emphasis on aspects applicable to ginning efficiency and fiber quality preservation. The master's degree will be offered in agricultural engineering, with a concentration in gin engineering.

Carolina Yarn Association Holds Its Annual Outing

THE beautiful rolling hills of the golf courses at Pinehurst, N. C. may never be the same but the Carolina Yarn Association has had its annual outing. This meeting was the 27th such conclave and was held May 16-18. The entertainment included golf and skeet tournaments which were capped with a banquet in the Carolina Hotel at which the prizes were awarded.

Frank Peake of Angle Silk Mills, Rocky Mount, Va., shot his way to the first prize in the skeet tournament. He and James Y. Rogers Jr., John L. Stickley Co. of Charlotte, N. C., were tied at the end of the regular match with 74 targets broken each. In the shoot-off which followed Mr. Peake hit 25 targets while Mr. Rogers missed only one, the fifth, which netted him second place.

Monty Hill, Leon-Ferenbach of Greensboro, N. C., took first low gross for the 36-hole golf tourney with a 141. First low net for the golfers was Roy Burd, Chipman-LaCrosse Hosiery Mills of East Flat Rock, N. C., whose Callaway System score was 133.

The Loot

One-hundred-seventy prizes were awarded to the golfers and skeet shooters. Veteran members of the association were unanimous in declaring this the best outing in the history of the meetings. Golf awards were on a handicap system which gave high scorers an equal chance with the low scorers in pursuit of the prizes. Skeet prizes were awarded based on a modified Lewis Scoring System which had the same effect.

Hole-in-one

Baxter P. Freeze of Commonwealth Hosiery Mills, Randleman, N. C., scored the shot of the tourney with a hole-in-one on the 11th hole of course No. 1.

Skeet Tournament

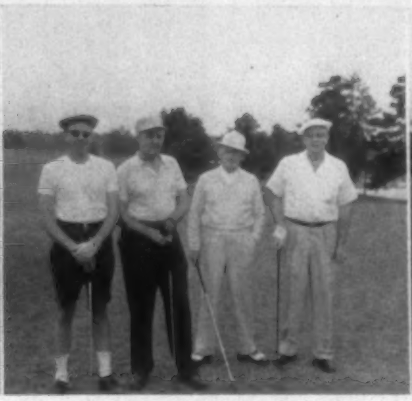
More than 40 shooters won prizes out of the 80 who completed the 75-target program in one of the most elaborate award systems ever set up at any skeet event. High guns did not necessarily win the best prizes. After the shooters were divided into classes under the Lewis system, lots were drawn to determine which class should have first choice of prizes. "E" class won the drawing, therefore

THE CHAMPS

← Capturing low gross honors in the C.Y.A.'s golf tournament was Monty Hill, Leon-Ferenbach Inc., Greensboro, N. C., with a 36-hole score of 141.

Top gun in the skeet shoot was Frank Peake *(right)* of Angle Silk Mills, Rocky Mt., Va., shown receiving the championship skeet bowl from Jim Rogers of John L. Stickley Co., Charlotte, N. C., chairman of the skeet committee. →

W. W. Wine, Lassiter Corp.; John Shea, Lassiter; George Bostick, P. H. Hanes; L. D. Tucker, Burlington Hosiery.



Eddie Jones, Johnston Mills; Jim Garner, Franklin Process; B. S. Phettleplace, Franklin Process; Henry Harris, Harris-Marshall Hosiery Mills.

C. W. Broome, Boyd-Lee Hosiery; Lee George, Boyd-Lee Hosiery; E. W. Walton Jr., Walton Knitting Mills; Whitey Heafner, Walton Knitting Mills; *Standing:* Pete Morrow, Dixie Mercerizing Co.

the high gun in this class actually had first choice at the prizes. Skeet scores and the contestant's company affiliation are Class A—Frank Peake, Angle Silk Mills, Rocky Mount, Va., 74; James Y. Rogers Jr., John L. Stickley Yarns, Charlotte, N. C., 74; Joe W. Bales, Maurice Mills Co.; E. J. Holbrook, American & Efird Mills; F. W. Warrington, F. W. Warrington Co.; Von D. Oehmig, Meinhard Co.; and Eugene Cross Jr., Cross Cotton Mills, 71; W. A. Wood, Duplan Corp., 69; David Johnston, Johnston Mills Co., 68; George Galphin, American Viscose Corp., 67; P. L. Reed, Marriner Co., 66; N. A. Cocke Jr., American Viscose Corp., 65; E. Clay Timanus, John L. Stickley Yarns, and Joe W. Ballentine, Smith Drum Co., 65; Amos Ragan, Ragan Knitting Mills; C. E. Boger and W. K. Stringfellow, J. P. Stevens & Co., 64.

Class B—Harry R. Wade, Textile Machine Works and Harry W. Curlee, Amazon Cotton Mills Co., 63; W. C. Cannon, Cannon Mills Co.; Milton May, W. R. C. Smith Publishing Co., and Eugene Timanus, American & Efird Mills, 62; Henry K. Kelly, American Viscose Corp.; E. H. Pleasands, Sumner Mills, and J. Allison Davant Jr., J. A. Davant Co., 61; G. W. Dudley, F. W. Warrington Co., and W. Richard Grey Jr., Richard Grey Hosiery Mills, 59; L. B. Allen, Comer-Avondale Mills; W. B. Choate, Piedmont Mop Co., and W. R. Austin, Avondale Mills, 58; Jack Bauch, 57; H. L. Amos, Amos Hosiery Mills, and F. H. Hallenbeck, Scott & Williams Co., 56; Class C—S. P. Stowe Jr., Belmont Hosiery Mills; Ed Taws, Fletcher Works Inc.; R. H. Walker Jr., Pickett Cotton Mills; Earl J. Wentz Jr., Roanoke Mills, and R. S. Small, Woodside Mills, 55; F. E. Price, American Viscose Corp., and J. J. Chamberlain, Chemstrand Corp., 54; Roy V. Atwater, Siler City Mfg. Co., 53; M. Y. Rudisill, Maiden Spinning Mills, 52; George V. Lewis, Adams-Millis Corp., 51; J. O. Foil, Hickory Throwing Co., 49; Sam A. Rankin, Interlock Knitting Co., and R. J. Fontaine Jr., Ramseur Worsted Mills, 48; H. Eugene LeGrand, Shelby Cotton Mills, and Paul Mauney, Marion Mfg. Co., 47.

Class D—W. Herbert Smith Jr., Smith Yarns, 46; W. A. Wyatt Sr., Wyatt Hosiery Co.; D. A. McKenzie, Chester H. Roth Co., and P. J. Sullivan, Amos Hosiery Mills, 45; E. B. Keith, The Top Co., 44; William F. Ranck, Sale Knitting Co., 44; J. R. Gaither, Ridgeview Hosiery Mill Co., 43; Herb Wade, Chester H. Roth Co., 42; J. L. Hunter, American Viscose Co.; Frank Longrier, Sellers Mfg. Co., and W. S. Vincent, J. P. Stevens & Co., 41; A. R. Engle, U. S. Rubber Co., 40; Wayne Lackey, Tex-Elastic Corp.; George W. Williams Jr., Alba Hosiery Mills; William K. Mauney Jr., Mauney Hosiery Mills, and M. B. Crigler, John J. Ryan & Sons, 37.

Class E—Herman Smith, Amos Hosiery Mills, 36; John L. Stickley Jr., John L. Stickley Yarns; Earle J. James, Hudson Hosiery Co., and E. H. Largen, Waterman Co., 35;

Bill Bowman, Shuford Mills; Reid Durbin, American Viscose Corp.; Carl Pate, American Viscose; Von Oehmig, Meinhard & Co.

C. E. Boger, Barnhardt Bros.; William M. Barnhardt, Barnhardt Bros.; Lonnie Huffstetler, Textile Banking; Bob Repp, Amazon Cotton Mills.

***Seated:* Ed Gregg, Amos Griffon. *Standing:* Charles Carvin, Bill Harmon.**

Sam Huffstetler, Parrott & Ballentine; E. T. Wrenn, Franklin Process; Matt Kurtz, N.A.H.M.; Martin Michie, U. S. Testing Co.

Hank Stowers, Marine Corps Instructor; Herb Simpson; Joe Ballentine, Parrott & Ballentine; Francis Price, American Viscose; Joe Hunter, American Viscose; George Galphin, American Viscose.

Herb Wade, Chester H. Roth; Tom Fulton, H. E. Crawford; George Williams, Alba Hosiery Mills; Shorty McDonald; Bill Mauney, Mauney Hosiery Mills; Duncan McKenzie, Chester H. Roth.

H. C. Simpson, American Viscose Corp.; W. G. Humphrey, Judson Mills, and J. D. Hallenbeck, 33; J. M. Tulley, Roanoke Mills; Charles D. Coleman Jr., J. P. Stevens & Co., and E. W. Best, Celanese Corp. of America, 30; King Harrison, 27; Quenton Cooper, Hudson Hosiery Mills, 19; F. L. Rapp, American Viscose Corp., 15; and R. P. Cassell, Roanoke Mills, 13.

* * * *

The Carolina Yarn Association's officers for 1957 are Frank P. Barrie, president; Henry Stokes, vice-president; John C. Thompson, secretary; and M. R. Dalton, treasurer. Serving on the Invitation Committee were Dan LaFar, chairman, Ted Toole, Harry Yarborough Jr., and Frank Goldsmith. The Refreshment Committee members were Harry Cramer, chairman, Louis Cramer and William Wine. The Entertainment Committee consisted of A. G. Myers Jr., chairman, Don Maddox and Eddie Jones. The Golf Committee was made up of W. D. Clark, chairman, Carl Pate, R. P. Wilson and Wilson Malloy. The Skeet Committee members were Jim Rogers, chairman, L. B. Allen and Robert Walker. The members of the Prize Committee were William M. Barnhardt, chairman, James H. Crenshaw and Charles Walcott.

Golf Scores

Following Mr. Hill in first place, other low gross score honors were Bryce R. Holt, Industrial Rayon Co., 143; Albert C. Gaither, Ridgeview Hosiery Mills, 143; J. L. Gray Jr., Gray Mills Inc., 146; Herbert M. Weymouth, American & Efird Mills, 147; W. W. Sharp Jr., Acclaim Hosiery Mills, 148; Von D. Oehmig, Meinhard & Co., 149; Decatur Cunningham, Hemphill Co., 150; Harris Covington, Harriss-Covington Hosiery Mills, 150; and C. W. Causey Jr., American Thread Co., 151.

In addition to Mr. Burd, the top winners for low net score (gross, handicap and net score given in that order) were Tom R. Smith, Wicassett Mill, 215-79-136; R. W. Stowe, Textiles Inc., 191-55-136; W. H. Shehan, Stonecutter Mills Corp., 152-16-136; C. F. Harry Jr., Minette Mills, (net) 136; Cy Girard, Central Yarn & Dyeing Co., 149-12-137; J. L. Hunter, American Viscose Co., 214-94-137; G. P. Taylor, J. P. Stevens & Co. Inc., 209-72-137; F. D. Heafner, Walton Knitting Mills, 231-94-137; and John G. Gaw, Waverly Mills Inc., 206-68-138.

Low net scores in order of finishing for the 36 hole tourney are:

Lewis Lavitt	138	Ted Toole	139
W. A. Aldridge	138	Thurman Richie	139
Bud Johnson	138	Henry Millis Jr.	139
Bob Hughes	138	Bob Howell	139
Harry James	138	Seward Byam	139
Frank Cloninger	138	June Gaither	139
Charles Wood	138	Charlie Ibach	139

Charles Campbell, Southerland Fabrics; John Bell, Stonecutter Mills; Bill Disque, Du Pont; Harold Haak, Textile Machine Works.

Phil Johnson, Dependable Hosiery; Frank McCrary, Acme-McCrary Hosiery Mills; Bob Hughes, Acme-McCrary; Henry Redding, Acme-McCrary.

Joe B. Johnson, Carolina Underwear Co.; Jim Anthony, B. F. Goodrich Co.; James Johnson, Maurice Mills Co.; Amos Ragan, Ragan Knitting Co.

Verne Delishice, Marine Corps. Instructor; Bill Wood; Hunter Galloway; Jack Holbrook; Hank Stowers, Marine Corps. Instructor.

George Lewis, Adams-Millis Corp.; George Dudley, F. W. Warrington Co.; Dave Long, Amazon Cotton Mills; W. F. Wyatt, Wyatt Knitting Mills; Murt Rudisill, Maiden Spinning Mills; Gene Cross, Cross Cotton Mills; F. W. Warrington, F. W. Warrington Co.

W. F. McFarlane, J. W. Ballentine, W. K. Stringfellow, Wilmer Wilmerding.

Oliver Gross	139
Francis Gerlie	139
Bill Wyatt	139
Herb Simpson	139
Turk Pharr	139
Wilbert Wood	139
Bill Leath	139
Meade H. Willis	139
Red Greene	139
Dick Jones	139
Charles Ix	139
Abe Ulitsky	139
Jim Lawrence	139
Lindsay Holcomb	139
Rupert Cassell	139
Jack Stripling	139
Jim MacDougall	139
Bill Franck	139
Jimmy Johnston	139
Ed Moore	139
Chip Clark	139
R. C. Rapp	139
Jack Burnett Jr.	139
Fred Wiley	140
Walter Shautz	140
Francis Price	140
Al Wilson	140
Bill Harry	140
T. A. Johnson Jr.	140
Ernest Chapman	140
Crawford Poag	140
Jim Cummings	140
Joe Eble	140
J. W. Malloy	140
Buck Cheatham Sr.	140
W. B. Sanders	140
Sandy Rankin	140
R. C. Worth	140
Henry Redding	140
R. S. Small	140
Jim Marshall	140
H. O. Kellett	140
C. F. Campbell	140
Rom Hawks	140
Jack Slane	140
Jim Mitchell	140
Bob Hass	140
Sam Castleman	140
Al Madel	140
B. Hughes	140
Frank Causey	140
Ernie Hunter	140
Archer Booker	140
Bill Bowman	140
B. Bell	140
Joe Farmer	140
W. A. Brown Jr.	140
Percy Payne	140
Henry Heafner	140
John Schenck	140
Wray Amos	140
Dave Cromwell	140
Claiborne Carr	140
Paul Russell	141
Albert Meyers Jr.	141
Paul Lavitt	141
Joe Pell	141
Frank Ix III	141
Fred Pollard	141
Ralph Whitaker	141
Clyde Gordon	141
Jim Pons	141
B. B. Brinton	141
Bob Dott	141
Jack Wellman	141
Frank Lacy	141
Earl J. James	141
Gaston Jennings	141
J. C. Richards	141
Tom Boland	141
Rod Matheson	141
Buddy Florence	141
Ellis Wrenn	141
George Freidlander	141
Harry Dalton	141
Jack Dover	141
Bill Blanton	141
Allison Davant	141
George Mengert	141
J. B. Howarth	141
Bob Gaither	141
Charlie New	141
Dalton Ruffin	141
A. B. Htuchens	141
Steve Soltis	141
Tom Etheridge	141
Frank Sucker Jr.	141
Bill Ward	141
Joe Zwisler	141
Ernest Holt	141
Pete Broome	141
Paul Tamplin	141
Fred Prissell III	141
J. O. Austin	141
Fred Marston	141
Walter Krause	141
C. C. Neal	141
C. Burnett Gilbert	141
Mack Ulmer	141
John Stickley	141
Bill Sawyer	141
C. J. Mills	141
Milton Southerland	141
Murray Davidson	141
Howard Rollins	141
J. O. Howard	142
Bill Vincent	142
Matt Kurtz	142
Joe Bird	142
Bill Williamson	142
G. Myers	142
M. P. Tulley	142
Brown Mahon	142
John Gilbert	142

Lawrence Reid, Washington Mills; Earle Wentz, Roanoke Mills; R. S. Dickson, American & Efird; T. C. Smotherman, American & Efird.

T. A. Johnson Jr., Dependable Hosiery Mills; Bruce D. Hodges, Burlington Yarn Sales; R. W. Hawks, R & H Hosiery Mills; Pete Morrow, Dixie Mercerizing Co.

Joe Russell, George Lewis, Al Baker, Paul Tamphs.

Lanier Branson	142
M. W. Hall	142
F. D. MacIver	142
M. P. Lyon	142
Art Newcombe Jr.	142
Charles Gilbert	142
Charlie Walters	142
Loe George	142
Quenton Cooper	142
Bob Bollinger	142
Jack Scott	142
Johnnie Green	142
Bill Yates	142
Joe Christian	142
Dave Hall	142
Bill Choate	142
C. Rowe	142
Norman Cocke	142
Charlie Sutherland	142
John Renger	142
William Torkington	142
Hub Wade	142

Members of the Carolina Yarn Association include Aberfoyle Mfg. Co., American & Efird Mills Inc., American Bemberg, American Enka Corp., American Thread Co., American Viscose Corp., Barnhardt Brothers Co., Belmont Throwing Co., Cannon Mills Inc., Celanese Corp. of America, W. T. Cheatham & Co., The Chemstrand Corp., Collins Yarn Co. Inc., Comer-Avondale Mills Inc., Cosby & Thomas, Courtaulds (Alabama) Inc., William H. Crenshaw, Cross Cotton Mills, Dixie Mercerizing Co., The Duplan Corp., E. I. du Pont de Nemours & Co., Durham Spinning Mills, Eastman Chemical Products Inc., The Elmore Corp., The B. F. Goodrich Co., Grove Silk Co., Harden Mfg. Co., Hartford Rayon Co., Hemmerich Corp., Hickory Dyeing & Winding Co., Hickory Throwing Co., Industrial Rayon Corp., Johnston Mills Co., Kahn & Feldman Inc., Leon-Ferenbach Inc., Madison Throwing Co., Harold Mahon, Nettleton P. Murphy, National Aniline Division of Allied Chemical & Dye Corp., North American Rayon Corp., Pharr Yarns Inc., Pickett Cotton Mills Inc., Sellers Mfg. Co., Southern Franklin Process Co., Southern Mercerizing Co., Standard-Coosa-Thatcher Co., John L. Stickley, TexElastic Corp., Textiles Inc., and Charles E. Wood.

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Opening, Picking, Carding & Spinning

Georgia Mill Men Discuss

Opening—
Picking—
Carding—
Spinning—
Spooling—
Warping—

The following is a report of discussions prepared for the Spring meeting of the Textile Operating Executives of Georgia. The meeting was held in the Harrison Hightower Textile Building on the campus of Georgia Tech in Atlanta.

THIS is a report of discussions on opening, picking, carding, spinning, spooling and warping at the April 27 meeting of the Textile Operating Executives of Georgia at the Harrison Hightower Textile Building of Georgia Tech in Atlanta. The report contains the answers given by Georgia mills operating a total of 1,343,572 spindles. Answers indicating "no experience" are omitted.

Question No. 1: Please give your experience with Super Jet cleaners. (a) Are they doing a good job of cleaning? (b) Do they increase your nep count? (c) Do you have them single or in tandem?

Mill E: Yes, our Super Jets are doing a good job of cleaning. (c) We run the Super Jets single on the opening line which is used for Egyptian cotton and tandem on the opening line used for American cotton.

Mill F: We have been using Super Jet cleaners for seven years. (a) We think they do a very good job of cleaning. On a mix of half low middling and half strict low middling, we are taking out .57 per cent motes on a jet that is processing 1,000 pounds per hour. (b) We have had no appreciable change in neps as a result of Super Jet installation. (c) We do not operate jets in tandem.

Mill G: We have had the Super Jet cleaners in use for approximately six years and find them entirely satisfactory. (a) The Jets do an excellent job of cleaning without damaging the stock by beating. (b) We have not found an increase in neps as the result of Super Jet installation. (c) We operate Super Jets in tandem.

Mill J: Our experience with Super Jets has been satisfactory. (a) They do a good job of cleaning. (b) We have not had an increase in neps as a result of Super Jet operation. (c) We do not operate the Jets in tandem.

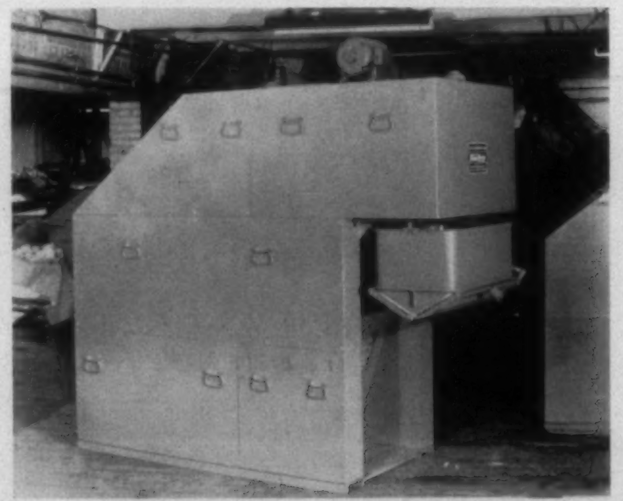
Mill L: (a) Our Super Jets do a good job of cleaning. (b) The Jets do not increase our nep count. (c) We have two units in tandem. For best results, we have found that the Super Jets should not be run at over 750 pounds per hour.

Mill X: In our opinion, the Super Jet cleaners do a very good job in removing leaf and trash from low grades of cotton. (b) Our nep count did not increase when we installed the Super Jets.

(*Editor's Note*—Would like to say that our experience with the Super Jet Cleaners, which are made by the Aldrich Machine Works of Greenwood, S. C., has been much the same as outlined in the answers given. However, we cannot agree with Mill L, which says the Super Jet should not be run at over 750 pounds per hour. We know of one installation where two Super Jets running in tandem feed approximately 1,500 pounds per hour to a line of pickers. This may be above the manufacturer's specification but they have been in operation for over two years and do a splendid job of cleaning.)

Question No. 2: Please explain in detail the method used in blending stock. (a) Where is the best place for blending dyed stock with natural? (b) Would the same procedure be used for blending viscose and natural? (c) Would the same procedure be used for blending Dacron and natural?

Mill F: We blend our dyed stock with natural in six blending hoppers that feed onto a conveyor apron and then to a press to be rebaled. Principally, we use a 25 per cent and a 50 per cent blend. We equalize our bale weights in units of four bales and run 48 bales to a set. We use eight bales behind each hopper. (b) and (c) We have had no experience with blending viscose or Dacron. However, we have blended nylon with cotton and Acrilan with cotton and have received a very accurate blend using the above described method.



A Fiber Meter made by Textile Equipment Corp.

Mill G: Our stock is blended in the opening room from raw stock. Our shades are gotten from feeding into the hopper the percentage of colored stock necessary to make the shade with the natural colored fiber. For our job, we think the opening room is the best place for blending.

Mill I: Our blending room consists of five hopper feeders which supply five additional blending feeders so as to assure a uniformity of blend. The doffer and combing roll settings are checked on all hoppers to make sure they have the same setting at all times. We actually time and weigh stock delivered from each hopper to assure ourselves that they are feeding at the same rate. Should we desire a 40/60 blend we would feed two hoppers on one stock and three hoppers on the other. (b) When blending viscose and other fibers we do not let the stock go through the first five feeders.

Mill J: Our method of blending dyed stock with natural is by using eight hoppers of which seven are on natural and one is on dyed. These hoppers feed a line which consists of a Lummus blending hopper, gyrator and a two-beater picker. First run picker laps are then fed through the same section again. (b) and (c) We blend these fibers in the same manner.

Mill L: The best place for blending dyed stock with natural is on the finisher picker. (b) and (c) Yes, we believe the same procedure is best for these fibers.

Mill X: We blend dyed and natural stock by placing the stocks in proportion behind blending feeders. The stocks are then processed through and re-baled. A "mix" of these bales is then placed behind the hoppers in the regular opening line and run in the normal manner. (b) and (c) We would use automatic fiber meters for viscose and natural and for Dacron and natural blends.

Question No. 3: Give your experience with high compression calender or stack rolls on pickers and answer the following questions: (a) Give weight compression calender or stack rolls on pickers and and diameter of laps before and after change. (b) How did it affect the quality of the lap and sliver? (c) Were job loads increased at picker or cards? (d) How are laps handled and transported?

Mill C: (a) Before installing the high compression rolls on pickers, we were running a 44½-pound lap which was approximately 18 inches in diameter. After installation of the compression rolls we ran a 60-pound lap of approximately the same diameter. We are running a 13½-ounce lap and have increased the length from 52.25 yards to 70 yards to get this increase in weight. (b) We have noticed a slight improvement in the percentage coefficient of variation of weight. (c) Card tender job loads were increased. (d) Laps are handled by hand and transported on a lap truck.

Mill D: (a) Before installation of high compression calender we had a 50-pound lap which was 18 to 19 inches in diameter. We are now running a 71½-pound lap which is 19 to 20 inches in diameter. (b) We cannot tell that the high compression calender has any adverse effect unless the pressure is set too high. In this case the fibers are visibly damaged. (c) Our card tender job loads have been increased. (d) We handle our laps on an American Mono-Rail automatic single loop lap handling system.

Mill I: We have one picker with a high compression calender roll. (a) We had a 59-pound lap which was 19 inches in diameter before changing. Our lap is now 69 pounds and still has a diameter of approximately 19 inches. (d) We handle laps by hand.

Question No. 4: The present trend is away from the three-beater picker to the two-beater picker. If you have made this change, what change did you notice in your stock? Any change in your nep count? Breaking strength?

Mill E: The nep count remained unchanged, the yarn strength remained unchanged and the lap uniformity was improved. This was on a later model picker.

Mill G: We have changed five pickers from three beaters. We notice that the stock does not curl as much, neps showed a slight decrease and our breaking strength was slightly improved.

Mill X: We removed a 30-inch Buckley section from our pickers leaving two 16-inch Kirschner sections per picker. We also made changes in our opening room simultaneously; therefore, our evaluation is made on the whole program. We had less picker motes, more card motes, ten per cent less neps in card web and five per cent increase in tensile strength of the yarn.

(*Editor's Note*—Most of the mills answering this question have been using two-beater pickers for many, many years with various beater arrangements and had no comparison information. We wonder why any mill running cotton would use two Kirschner beaters in a two-beater picker? We know there must be a good reason but can't think of what the reason would be. Our understanding is that Kirschner beaters have a more pronounced damaging effect on the fiber than either two-blade or three-blade beaters. We believe that the yarn's ultimate tensile strength is determined when the stock is being processed through the picker. Beater types, speeds and settings determine this strength, in our opinion. We believe that the Kirschner, or carding, beater does the most damage to the fiber because it actually does more work on the fiber. Blade beaters simply strike at or smash at the fibers as they pass through the feed rolls. The trash and heavy impurities are literally knocked out of the mass of stock. The pins of the Kirschner beater actually pass through the mat of fibers and deliver a combing or carding action, combing out the impurities. The staple is thus broken if the individual fiber is being held at one end by the feed rolls or if the fibers are bound rather tightly in a clump.

Question No. 5: What experience have you had with nylon condensers on cards and drawing frames? (a) State job load changes, if any. (b) State amount of increase in sliver cans. (c) What effect did it have on sliver variation?

Mill C: (a) Job loads were not increased when we installed nylon condensers because of a layout problem. (b) The nylon condensers enabled us to increase sliver weight in cans by about ten per cent. (c) We have found that the new condensers do not change the sliver variation.

Mill D: We are now in the process of putting nylon condensers on our cards. We have found that there is an improvement in quality in so doing. One of the main objections is that there is no way these condensers can be gauged. Also, they appear to wear fairly rapidly. (b) Our

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One of the most important pay-offs derived from proper beater speeds is found at the lap tester. If the lap meter, or other uniformity testing device, says that the lap is good, little advantage is gained in either a two or three-beater picker. This is true only if the proper type beaters are running at the correct speeds with the best settings in each section.

can weights are being maintained by installing compression springs on the calender rolls.

Mill H: We found that nylon condensers on our cards made the sliver too hard for the breaker drawing frame to draft. On drawing, we use a Saco-Lowell nylon condenser. Sliver in can increased from 13.5 pounds to 16.0 pounds on 12x36-inch cans. The condenser did not affect sliver variation.

Mill M: We tried the nylon condenser on 12 cards and found that they increased our doff cycle by 12½ per cent when they were new. After about two months, the trumpets were worn to the extent that we could not maintain the increased doff cycle. We finally concluded that to maintain the increase in doff cycle we would have to change the trumpet so often that the cost would be prohibitive.

Mill N-1: (a) Due to the limited number of nylon condensers we have on cards and drawing we have not increased job loads. (b) On cards, we were able to increase card sliver in the can approximately 40 per cent. (c) We have seen no ill effect on sliver variation when using the nylon condenser.

Mill Q: We use nylon condensers on cards. (a) Our card assignments were increased nine per cent. (b) The amount of sliver in the can was increased by approximately 40 per cent. (c) We have not experienced any difference in sliver variation on cards or the drawing made from this card sliver since putting on the nylon condensers.

Mill X: Our experience with nylon condensers on cards and drawing has not been favorable. (a) We were not able to change job loads. (b) We tried a 20 per cent increase in can content with little success and finally settled on a ten per cent increase. (c) We have found the compressed card sliver to be very detrimental to good drafting on breaker drawing. Excessive uneven wear on condensers caused variation in both card and drawing sliver.

Mill Y: We have tried and discontinued nylon condensers on cards. (a) We were not able to effect a change in job loads. (b) We had only a slight increase in amount of sliver in the can. (c) Sliver variation increased due to uneven wear on the nylon condenser. This was the reason for discontinuing their use.

Mill Z: We have used them on card coilers for two years. They increased the amount of sliver in the cans by approximately 12½ per cent. We have seen no noticeable affect on sliver variation. . . . After two years there is some evidence of wear but we are still getting good compression on middling stock.

Question No. 6: What is the best practical way of eliminating static on cards and drawing while processing synthetic fibers on the cotton system?

The vast majority of mills answering this question said that static is best controlled by maintaining a constant relative humidity and temperature in the room. This humidity and temperature would depend on the fiber and other local conditions. Some mills recommend treating the stock with an anti-static spray in the opening and picking processes. These sprays are reported to be much better than conventional static eliminator attachments on the machinery. One mill reports the use of plastic trumpets, gummed paper-wrapped calender rolls and grounded machinery in the battle against static electricity.

(*Editor's Note*—We would like to point out that this edition of TEXTILE BULLETIN carries excerpts from an article by Irving A. Berstein of Tracerlab Inc., which is titled "Application of Radioactivity in the Textile Industry." One of the applications which Mr. Berstein mentions is that of a Beta ray emmitter which is used to eliminate static electricity. These applications are reported by Tracerlab to be available now for use in the industry.)

Question No. 7: At what speeds do you run Kirschner beaters?

Mill A: We have a two-blade beater and a Kirschner beater. Kirschner beater runs at 990 r.p.m. on 1-1/32-inch strict low middling cotton.

Mill B: At one plant we run Kirschner beaters from 850 to 950 r.p.m. In another, we run Kirschner beaters at 1,225 r.p.m.

Mill F: Only our front beaters are Kirschners. After experimentation, we have found that we *felt* the best lap could be made with a beater speed of 1,050 r.p.m.

Mill I: Both breaker and finisher Kirschner beaters run at 1,075 r.p.m.

Mill N: Using a Kitson Model 90 picker running synthetics, our speeds are finisher—800 r.p.m.; breaker—650 r.p.m.

Mill N-1: Our breaker section Kirschner beater is run-

Why Use New Equipment? SEE PAGE 55

ning at 700 r.p.m. and our finisher section Kirschner is running at 850 to 900 r.p.m.

Mill X: We run the breaker section beater at 800 r.p.m. and the finisher section beater at 1,200 r.p.m.

Other mills reported Kirschner beater speeds ranging anywhere from 790 to 1,238 r.p.m.

Question No. 8: How do you determine the amount of neps in your card web and do you take the weight of the web into consideration?

Mill A: Regular nep counts are always made at the middle of the stripping cycle. A sample of web is placed between a blackboard and a 10x5-inch glass cover with lines marking off square inches. The neps are then counted. Three samples are counted from each card—one from the center of the web—and one from each edge. Normally no consideration is given to weight of stock as all our sliver is 62 grains per yard and we do not believe the differences in neps caused by slight variations in weight are enough to warrant checking the weight of each sample. However, when we run tests on different weight card slivers, we adjust the nep counts by proportion to our regular weight for comparison.

Mill B: Neps are reported per gram.

Mill C: We determine the number of neps by counting 50 square inches of web. No consideration is taken of the weight of the stock.

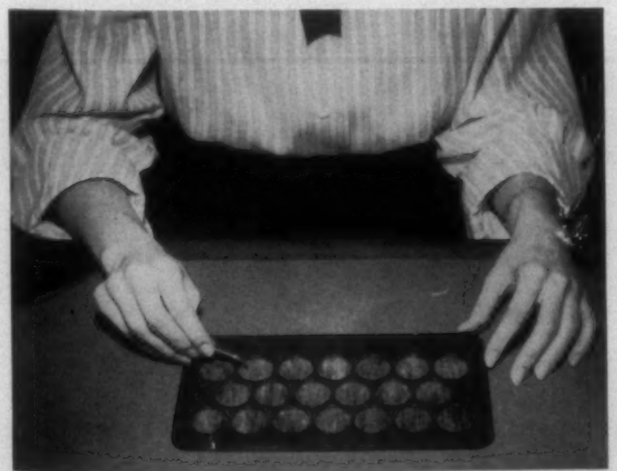
Mill D: We count the number of neps per square inch of web and do not consider the weight of the stock.

Mill E: The number of neps contained in 100 square inches of card web are counted. A sample is taken from each side and the center of the web.

Mill F: We place a board covered with black velvet under the card web and pick up the entire width of the web. We place over this another board that contains 30 round holes each having an area of one square inch. We count the neps appearing in these holes and convert to neps per 100 square inches. We do not take into consideration the weight of the stock.

Mill G: Our nep counts are taken and are reported on the basis of the number per 100 square inches of web. The method of determining neps is not changed by weight so that we have comparable records on a given stock.

Mill H: We use a regular blackboard with template and count 20 square inches at a time. Weight of the stock is not taken into consideration.



The nep counting template developed at the North Carolina State College School of Textiles.

Mill I: We count neps per 100 square inches of the web from the card and weigh this web in grains. Results are reported in neps per grain.

Mill J: We count neps on a 9x4-inch board and pro-rate the result to 100 square inches. We do not consider the weight of the stock.

Mill L: We use a black card 5x10 inches with a piece of glass the same size. We stop the card's doffer, put the black card under the web and cover it with the glass. We count all the neps we can see. No consideration is given to weight of the stock.

Mill M: We use a 50-square-inch, satin-covered board with a plexiglass plate blocked off in one-inch squares to count neps in card web. Three samples are taken for each card—one in the middle and one on each edge. Our stripping cycle is three hours and for routine tests the nep count is made at the 2½-hour point in the cycle. We do not take into consideration the weight of the stock.

Mill N: We use a 20-square-inch template and express results as neps per square inch. Weight of sample is not considered since sliver weight is constant. We convert figures when comparison is necessary.

Mill N-1: We use the 20-sqaure-inch template developed by North Carolina State College and get five samples across the face of the web. Weight of sliver is not considered.

Mill P: One sample is taken from each side of the web 30 minutes after stripping. The sum of the neps in both samples is divided by the total weight in grains and the result is reported as neps per grain.

Mill T: We count neps in 100 square inches of card web. No consideration is given to weight of the sample.

Mill U: We use a black felt-covered board with a metal plate hinged onto it. The plate has 20 uniformly spaced, one-inch area holes cut in it. The web is placed on the board and the plate is closed. This holds the web without distortion and the neps showing through the holes are then counted. Five samples are taken thereby affording nep counts from 100 square inches of web. Neps per grain are calculated using the following formula:

$$\text{Neps/gr.} = \frac{14.40\text{ gr.} \times \text{neps/100 sq. in.}}{\text{wt. in gr. of 1 yd. card sliver}}$$

Mill V: We count neps in 100 square inches. We consider weight of the stock.

Mill Y: We count 100 square inches and report results as neps per grain.

Mill Z-1: We gather the web as it emerges from the doffer on a black board with a 100-square-inch critical area lined off with white ink. Neps in this area are counted. We do take into consideration the weight of the stock.

(*Editor's Note*—On Page 95 of the October 1956 edition of TEXTILE BULLETIN appears a description of the method for counting neps which we believe to be the most accurate. Our observation has been that the weight of the sample *must* be considered for accurate and consistent results. No picker that we know of can make a lap which has identical weights of stock across the width of the lap. When one inch of a 16-ounce lap is fed into the card, a total of approximately 193 grains is fed across a 40-inch width. We do not believe that each ten-inch width of lap would weigh 48 grains (or each five-inch width would weigh 24 grains) and, therefore, we believe it necessary to base the nep count on the number of grains the sample counted weighed. The number of neps in a 2.0-ounce sample would certainly be less than the number of neps in a 2.5-ounce sample.

We also believe that for consistency of conditions and test results the nep count must always be taken at the same period during the stripping cycle. For realistic evaluation of relative neppiness of the web, we believe that the neps should be counted during the time the stripping cycle has run between half and two-thirds of its course.

We believe, along with most of the mills which answered this question, that the neps should be counted across the width of the web. This is our assumption because neppiness, like weight, is not likely to occur in identical frequencies across the width of the web.)

Question No. 9: What results are you obtaining in regrinding flexible bends?

All the mills which answered this question indicated that regrinding flexible bends allowed more uniform setting of flats to cylinder over the entire circle of the bend. Of course, these better settings improve the quality of the carded web and they result in less facing of clothing on cylinder and flats.

Question No. 10: What is the proper amount of lap waste to make in creeling laps? That is, what length of the "tail end" should be discarded and not allowed to run through to prevent damage to the cards?

The majority of mills answering this question allow approximately one-half yard waste at the "tail end" of the lap. No mill answering permitted the lap to run completely through the card. The reason for this is the tail end of the lap is wrinkled and perhaps a little heavy due to starting on the picker's lap pin.

Question No. 11: Have you had any experience with anti-friction compounds on roving frames? What were your results?

Mill T: Our Saco-Lowell FS-2 roving frames came equipped with an anti-friction compound. They have not given any trouble as yet and have been in operation for five years.

Mill Z-1: We installed anti-friction compounds on 12 roving frames in 1939/1940. They have been satisfactory in every respect. We have not had to go into one in that length of time.

Question No. 12: In setting mote knives on cards, what angle do you find to give the best results?

The mills answering this question gave angular setting of mote knives from ten to 30 degrees. A small majority of the mills said they set mote knives between 15 and 18 degrees. The amount of waste to be taken out determines this setting, of course. Where more waste is to be removed the angle is set higher and the reverse is true if less waste is to be taken out.

Question No. 13: In changing spinning frame traveling cleaners to type with flexible cuffs for cleaning rails, floors, etc., how much hand cleaning and sweeping has been eliminated? (a) Have you had trouble with travelers loading and wearing? (b) Have gouts, slubs, etc., been reduced? (c) Was relative humidity changed in room after flexible cuffs were added?

Mill C: Our hand cleaning schedules were changed as follows: from 24 to 48 hours on wiping back steel plates and lever screws; from twice to once per shift for brushing base rails; from twice to once per shift running out thread guides; brushing pig tails was eliminated. No change was made in brushing creel boards or sweeping. (a) There has been no noticeable difference in travelers loading. (b) Slubs and gouts were reduced but we cannot say how much in view of the fact that Pneumafil was installed at the same time. (c) Relative humidity has changed but primarily because of the Pneumafil installation, we believe.

Mill D: Levers and thread boards are cleaned once each 24 hours where formerly we had to clean them every eight hours. (a) Travelers load more and their life has been decreased. (b) Gouts and slubs have been reduced to some extent. (c) Relative humidity has not changed.

Mill H: We were able to decrease hand cleaning by about one-third. We have not had increased traveler loading. Our gouts and slubs were not decreased by this factor alone and the relative humidity has not changed in the room.

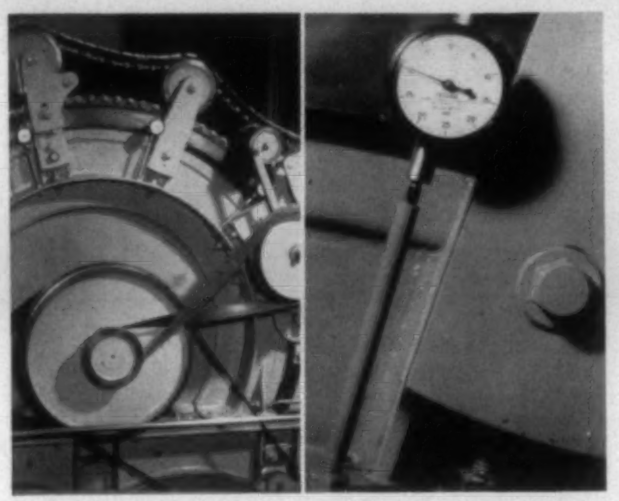
Mill I: Traveling cleaners with flexible cuffs have allowed us to eliminate hand cleaning of thread guide boards and base rails. (a) This type of cleaning seems to help keep travelers from loading. (b) Gouts and slubs have been reduced. (c) There has been no change in relative humidity.

Mill L: We have eliminated about 75 per cent of hand cleaning using flexible cuffs on our traveling cleaners. (b) We did not notice any difference in slubs and gouts.

Mill M: We have not eliminated any cleaning and sweeping. (a) We have had no trouble with travelers loading and wearing. (b) We have not seen any change in gouts and slubs. (c) Relative humidity has not changed as a result of these new cleaners.

Mill N-1: We have eliminated the necessity of blowing off creels by hand, decreased the cycle of blowing off spindle base by 67 per cent, decreased cycle of wiping back sides by 67 per cent, decreased cycle of running out sides by 50 per cent and decreased cycle of wiping top and bottom creel boards over 400 per cent. (a) We have had no trouble with travelers loading and wearing. (b) We consider gouts and slubs have been reduced. (c) The relative humidity has not been changed.

(*Editor's Note*—Our observation is much the same as the majority of the mills which answered this question. We have noticed a decrease in the frequency of hand cleaning in some areas and an elimination of hand cleaning in other areas. Of course, the degree of the decrease is a situation which is entirely dependent on local conditions. It is hard to conceive of a mill installing these cleaners and not being able to decrease any hand cleaning. It is possible that the cuffs are not being properly positioned in this case. Some of these cuffs have been known to stand away from the frame and the air which comes out of the



Left, **dial gauges attached to the flexible bend on the card as as near the setting points as possible; *right,* a close-up view of one of the dial gauges described in an article entitled "Developments In Nep Control" by Howard L. Loveless in the February 1950 edition of TEXTILE BULLETIN.**

various holes along the cuff is not directed at the proper area. Also, the velocity of air may not be proper. However, if the velocity and direction of air coming from the cuff is correct there is nothing that we can think of which should keep the spinning frame from remaining much cleaner at all times, thereby reducing the necessity for hand cleaning.)

Question No. 14: Give your experience on the following in going from spun to quilled filling: (a) Weight of spun package versus quilled package. (b) Give any figures you have comparing slubs and gouts in cloth on spun and quilled filling. (c) Considering investment cost of spinning, winding, quilling, etc., and resultant saving from spinning through weaving, were you able to justify this expenditure from a cost savings standpoint? (d) Give your opinion of value of quilled filling from improvement of cloth quality and appearance.

Mill H: (a) We are putting 15 per cent more yarn on the quilled package. (b) Burling cost has been decreased by 25 per cent on quilled fabrics. (c) No, we cannot justify this expense from a cost savings standpoint. (d) Our experience is that quality on quilled filling fabrics is much higher.

Mill J: (a) Our spun package weighs 650 grains and our quilled package weighs 800 grains. (b) Quilled filling is free of slubs. (c) There is no tangible saving. (d) Quality and appearance of quilled filling fabric is far superior. The fabric is free of slubs and contains very little trash.

Mill K: Our spun filling bobbins weigh 0.100 pounds as against 0.140 pounds for our quilled filling bobbins. (c) We find that on 6.5s yarn the equipment will amortize in 2.6 years. (d) Seconds have been reduced since we began quilling filling but we have not as yet established to what extent.

Mill L: (a) The quilled bobbin weighs about 20 per per cent more than the spun bobbin. (b) Filling slubs have been reduced by 50 per cent. (c) Savings in doffing, battery filling and burling will amortize the cost of the quillers. (d) Quilled filling improves the quality of the cloth.

Mill N: (a) Quilled filling has increased our package weight by 39 per cent. (b) We feel that we have practically eliminated slubs and gouts by going from spun to quilled filling. (c) We find that we have effected a slight saving by making this change. (d) We have made a marked improvement in the quality and appearance of our cloth by changing to quilled filling.

Mill S: (a) Our spun package weighs 1.75 ounces and our quilled package weighs 2.42 ounces. (c) We feel the improvement in quality alone was enough to justify the expenditure.

Mill U: (a) Our quilled package weighs 0.1354 pounds as against 0.1129 pounds for our spun package. (b) We find that we have approximately one-third less slubs and gouts. (d) We have been conducting tests on a broken twill fabric for the past year and our seconds on this style were reduced by 50 per cent.

Question No. 15: We would like to have a discussion on the new type large ring three-inch spinning frames. (a) Give yarn number. (b) What is your front roll speed? (c) What type bobbin, length, net weight and ring size? (d) How many bobbins will a doffer lift in eight hours? Do the doffers work in pairs? (e) How often must travelers be changed? (f) What are your ends down per thousand spindle hours? (g) What is your roving package size? (h) Is the yarn spooled or run on winder?

	Mill B	Mill E	Mill K	Mill P
(a)	2s & 4s	21s	5s & 7s	3½s & 4½s
(b)	165 r.p.m.	32.725 f.p.m.	192 & 187 r.p.m.	165 & 150
(c)	12"—0.625 lb.	12" wooden tube 0.60 lb.	12" paper tube 0.714 lb.	11½" paper tube
(d)	6,600 lifts		6,624 lifts	7,200 lifts
(e)	every 10 days	once per month	72 hours	every 3 days
(f)	60 EDPTSH		40 EDPTSH	55 EDPTSH
(g)	10x5	1.25 lb.	12x6	12x6
(h)	4s—spooled Coarser—wound	Winder	Winder	Winder

Question No. 16: On anti-friction top drive filling spindles, what spindle speed do you run? (a) What front roll speed? (b) Do you doff a tight end? (c) How often are spindles cleaned and what method is used to clean spindles? (d) What yarn count is run?

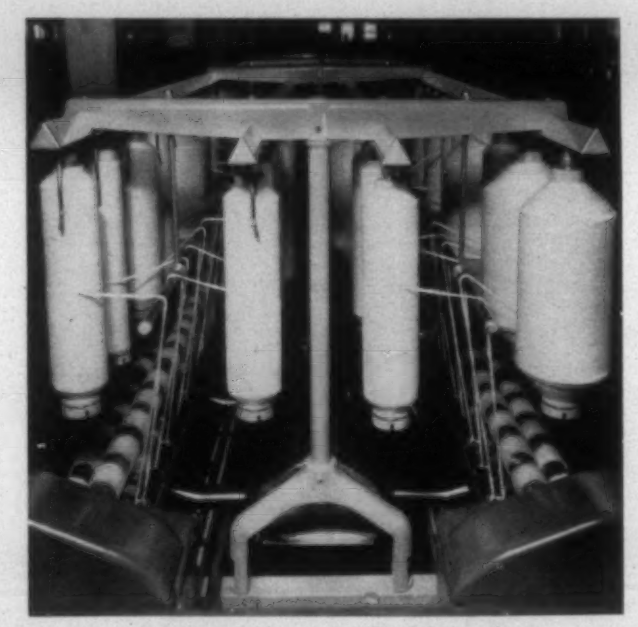
Mill H: Spindle speed run in our plant on 32s filling is 10,150 r.p.m. (a) Our front roll speed is 141 r.p.m. (b) We do not doff on too tight an end. (c) We clean spindles once per week. Before the frame gets full we stop the frame and lift up the quill and cut the yarn from the spindle.

Mill L: On 40s filling we run our spindles at 11,250 r.p.m. (a) Our front roll speed is 131 r.p.m. (b) We do not doff on a tight end. (c) Yarn is cut off spindles once a week.

Mill M: We run 41s filling and our top drive spindles turn at 11,500 r.p.m. (a) The front roll speed is 140 r.p.m. (b) We doff a tight end. (c) Spindles are cleaned off every 24 hours by slipping waste off the top of the spindle with the fingers.

Mill P: Our spindle speed is 9,000 r.p.m. on 20/1 and

22/1. (a) Our front roll speed is 162 r.p.m. (b) We doff on a tight end. (c) Our spindles are cleaned once every four days. When the quill is approximately one-half full, the frame is stopped and the traverse is wound to the top. The operator lifts the quill from the spindle, removes the choke and replaces the quill on the spindle.



Open-Aire creel made by The Bahnson Co.

Question No. 17: On open air creels on narrow gauge frames, have you been able to creel your roving all in one row or line rather than two? If not, how have you been able to allow enough air through the creel to do any good in regard to under frame cleaning? (a) In changing to open air creels, did you gain or lose help in your roving handling? (b) Describe your roving boxes or creeling with the open air creel.

Mill N: We have found it necessary to creel two lines with our open air creels. We do not seem to have any trouble with air flowing through the creel as we use the new type cleaners with cuffs. (a) We were able to eliminate the operative who laid up roving by making this change. (b) We have special roving frame doff trucks which are as wide as one bobbin of roving is long. Each truck will hold one-half doff of roving and trucks are so built that they may be hooked together side by side for doffing roving frames. The trucks are equipped with spring bottoms and have a container for empty quills attached.

Mill S: We use 12x6½ roving on three-inch gauge frames and use the 4 over 2 creel. On our 3½-inch gauge frames we use the 4 over 0 creel. (a) We did not gain or lose in going to open air creels, if we stayed on the same package roving. We did gain when we changed from 10x5 to 12x6½ roving. (b) We use special spinner roving buggies which are one inch wider than the length of the roving bobbin. The buggy has a spring bottom which keeps roving within easy reach at all times.

(*Editor's Note*—One advantage to using a roving box such as mentioned by Mills N and S is that the roving bobbins are stacked and not thrown into a deep wooden doff box when the roving frame is being doffed. Many good bobbins of well opened, picked, carded and drawn roving have been damaged or ruined by being tossed into a box by the man doffing the roving frame.)

Question No. 18: Do you have a method of checking new quills to see if they run true on spindles at high speed? What per cent rejects do you have? Do you have a system of culling out damaged or worn quills?

Mill D: We use a bobbin testing machine on new quills. Our rejects run approximately 2.50 per cent on one manufacturer and 3.52 per cent on another. We do not have a system for culling out bad quills.

Mill O: We use a gauge for checking size of quills. Doffers cull bad quills as they doff. The quiller operator also watches for bad quills as she fills the quiller hopper.

Mill U: Only a visual check on each case of quills is made as they are put into production. We have two people trained to cull bad quills and they do this work on the week-end once per month. The look for split quills, rings missing, quill stripper damage and bruised.

(*Editor's Note*—Mill D seems to be on the right track. We go to the trouble to test the cotton we receive, we check castings in the machine shop, and do all sorts of inspection on other spare parts which go into the mill. Why shouldn't we give a close inspection to new quills going into production?)

Question No. 19: When changing to large package spinning, did you get an increase in roll-around tangles on Barber-Colman spoolers? How did you overcome this? (a) Give yarn numbers, package size, type bobbin, type package build and spooler speed. (b) What system do you use for cleaning tangled yarn from the Barber-Colman spooler?

Mill I: We have recently installed two new Barber-Colman spoolers with 306 units to each spooler. They came equipped with break down devices. This device controls the size of the cheese. When the cheese gets to the maximum size, the end is broken down. This prevents roll-around tangles on the cheese. (a) Our yarn number is 8.8s. We have a three-inch ring and a ten-ounce package. We use a combination build on a 10½-inch wooden bobbin. Our spooler speed is 1,000 yards per minute. (b) We have a tailing machine with one operator per shift who cleans up the tangled yarns.

Mill N: We are trying to correct roll-around tangles by paying close attention to our settings on detector fingers, springs and spindles. We also check our bobbin buckets often and keep them in good condition. (a) We spin 30/1, 20/1 and 15/1 with a nine-inch traverse, on 2¼-inch rings, paper bobbin and use a combination wind. Our spooler speed is 900 yards per minute. All of our yarns are synthetics. (b) All tangled yarn is cleaned by a tangled yarn hand who does most of the work at the tailing machine.

Mill S: Roll-around tangles are eliminated by putting on break-down devices on spoolers. These devices will break down the end when the cheese has reached proper size. (a) 17s warp is run on 2½-inch ring, nine-inch traverse, seven-ounce package, paper bobbin, warp wind and at a speed of 1,200 yards per minute on the spooler. (b) A tangled yarn hand is assigned to run off tangles on an upright spindle.

Question No. 20: Please give your method of cleaning warpers and creels. (a) How often are they blown out? (b) Are oscillating fans or suction hood system used over warper fronts to keep out flying lint? (c) Are warpers separated by curtains or partitions? If so, what are advantages of such things?

Mill C: We blow off warper with an air hose each time a creel is changed. (b) We have oscillating fans over our warpers to keep out flying lint. Our warpers are separated by a curtain which can be lowered when the warper is blown off. In this manner one warper can be blown off while the other is running.

Mill G: We clean warpers and creels with compressed air. (a) We blow down our warpers at the end of each shift. This includes warpers, creels, light reflectors and ceiling. (b) We have oscillating fans placed at points on the creel so that all the yarn in the creels will be blown by the fans. We also have oscillating fans in front to clean the yarn as it goes through the warper.

Mill J: (a) We blow off creels and warper every time they are turned. (b) We use oscillating fans. (c) We have partitions blocking off our warper creels which prevent loose lint from being blown into adjacent warpers.

Mill O: (a) We blow off warper and warper creels after each creel of yarn runs out. (b) We use oscillating fans over warper front and creels. (c) We have each warper partitioned off. When blowing off one of our warpers this wall keeps lint from blowing into the other one that may be running. Also, the partition helps to reduce draft in the warper room.

(*Editor's Note*—The use of partitions between the warper creels seems to depend on factors existing in the individual plants. Some of the mills answering this question did not use partitions because they only had one warper and it was well isolated. Other mills answering this question had four or five warpers, spaced closely for operator efficiency, and had to use tall partitions to keep lint from flying around the creels. One of the mills answering this question had, in addition to oscillating fans, a 30-inch fan blowing across the front of the warper. The big fan was hooked up to the warper's electrical system so that it was running only when the warper was running.)

Abney Tours Offered Clemson Freshmen

Abney Mills of Anderson, S. C., in an effort to encourage high school graduates to study textiles, is inviting applicants for admission to Clemson College's freshman class to visit the Abney Mills plants in their respective areas of the state for plant tours and conferences on textiles as a career. A company official stated that following the tours, the prospective textile school students will have opportunities to ask questions about textiles as a career, as well as questions concerning all phases of textile manufacturing. He also said that the visitors will have the privilege of directing their questions to representatives of all levels of management.

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Warp Preparation & Weaving

A Manual For Testing Procedures

—STAFF PREPARED—

This installment of the testing procedures series tells how to find the amount of stretch put in the yarn by the slasher and what to do with it when it is found. Also included is a description of a method for determining relative viscosity of size formulations.

TESTING on the slasher can yield some rather interesting results and may make considerable difference in the over-all operations of the looms. A well slashed warp is necessary if the weave room is to be run at its peak efficiency and, of course, an aim of practically everyone connected with the mill's operation is optimum efficiency of all equipment.

The amount of stretch applied to the warp while it is on the slasher should be subjected to considerable study. Different sets of conditions exist for different counts of yarns which may be made from a great variety of fibers and may have one of many twist multiples. However, a basic test which can easily be run by any mill is not affected by any of these factors. The slasher stretch test may have widely varying results from mill to mill but its methods should be substantially constant.

The stretch test requires the use of two test operators. Each tester is equipped with a yardage counter which registers to the nearest 0.1 yard. The object of the test is to measure the number of yards which runs off the warper beam at the back of the slasher and the number of yards which are wound on the loom beam at the front of the slasher, within a given period of time.

The test operators station themselves, of course, at the back and front of the slasher. The tester at the back should be the test leader and will have the responsibility of starting and stopping the test. The testers must work out a system of arm signals for the start and finish of the test. The test leader may place the wheels of his yardage counter either on the back warp beam in the set or he may use the roll at the size box before the yarn is immersed in the size. The results will be different because the yarn receives a small amount of stretch, while it is dry, in running from the warper beam to the size box. This difference should be slight if the warper beam bearings are allowing the beam to turn freely and are well lubricated. The tester at the front of the slasher should run his yardage counter on the loom beam as it winds on the slashed warp yarn.

On a given arm signal both testers place their counters on the moving warp yarn. For greater accuracy it may be well to have the slasher running at slow speed when this is done. The slasher may then be speeded to normal running position and the yardage is recorded by the counters. When the test leader's counter indicates a predetermined number of yards he signals the tester at the slasher's delivery end and both men withdraw their counters from contact with the moving yarn at the same instant and should immediately stop the wheels from turning.

Test Results

The difference in yardage indicated by the two counters is then expressed in percentage and the amount of stretching action the slasher has had on the warp yarn is determined. For convenience sake, the test may be run in increments of 100 yards. The test leader's counter will always read 100.0 yards in this case. The other tester's counter will always read some number which is greater than 100.0 yards if the test is run properly. The difference between the two is the per cent stretch. Thus, if the counter at the front of the slasher read 102.5 yards the slasher stretch for the test would be 2.5 per cent.

For greater accuracy in testing results, increments of 200, 300 or 400 yards may be used. Of course, in this case a small calculation is necessary to determine the percentage of stretch. If the test leader's counter read 300.0 yards and the other tester's counter read 309.9 yards the per cent stretch would be:

$$\frac{309.9 - 300.0}{300.0} \times 100\% = 3.3\%$$

For readings of 400.0 and 412.8 yards the per cent stretch would be:

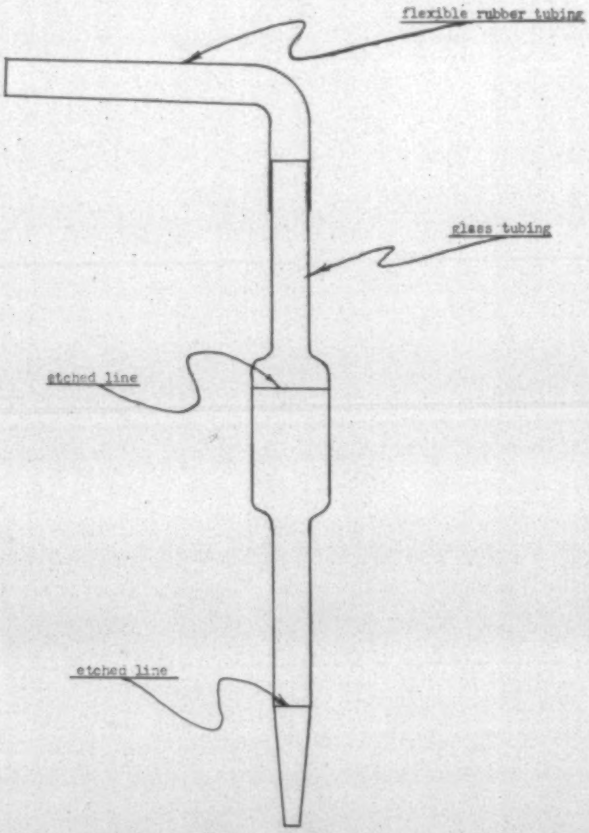
$$\frac{412.8 - 400.0}{400.0} \times 100\% = 3.2\%$$

These calculations are, of course, quite elementary and merely express the percentage which the unslashed yarn stretched during its pass through the slasher.

Proper Amount Of Stretch

The correct amount of stretch to be placed in the yarn is a fascinating subject since it has, apparently, so many answers that only intense study can determine the best relation for the particular situation. When yarn is stretched on the slasher, to any degree, a certain amount of the natural elasticity of the fiber is removed. The yarns must have elasticity if they are to make the pass through the loom harness and beating-up action of the lay without rupturing. It seems that the least amount of stretch on the slasher is the best. Slasher stretch, is, after all, only an uncontrolled draft and should be treated as such.

The other side of the coin is that, if the yarn gets through the slasher in a straight manner it must have a degree tension applied. The stretch which results is that tension which is not recovered by the fiber's natural elasticity. Tension is necessary to keep the yarn in the lower plane from running under any of the rods which split the sized yarn as it comes off the last drying cylinder or hot-air chamber. Tension is also necessary if the yarn is to run through the dents in the slasher's comb.



Glass tube and rubber hose combination for use with a stop watch to determine the relative viscosity of size formula. The size is drawn out of the size box into the tube by means of sucking on the rubber hose. The size level is brought up to the line which is etched on the large part of the tube. Then, holding the tube in a vertical position, the size is allowed to run out. The length of time necessary for the size level to run down to the second etched line is determined by use of the stop watch.

It is obvious then that some tension is necessary if the slasher is run properly and therefore some stretch of the yarn is inevitable. The matter resolves itself into the question, how much stretch is best for our operation? The answer is found in testing procedures applied to the cloth which is to be made and to the operating characteristics of the looms themselves.

One style of cloth is picked for the testing and when a set is being run on the slasher for this style frequent testing should be done to determine accurately the average stretch which is placed in the warps made. Suppose the stretch is found to be 3.0 per cent. The next step is to make another set of the same style with the per cent stretch averaging 2.0, if this percentage runs properly on the slasher. The warps from both sets should be marked so that their identity is quite obvious. If possible it is well to place the warps on looms which are in close proximity of one another. Loom stop tests may then be run and the actual efficiency of the loom and the number and kind of warp stops are easily determined. In addition to the loom stop tests, samples of the cloth should be broken on a tensile strength tester since these results will add support to the results of the loom stop tests. Care should be taken to assure an adequate number of samples are taken to get good averages in all cases. Slipshod testing procedures may affect the results considerably. The old saying is that "figures don't lie but you can bend the heck out of them."

One of the two degrees of stretch will yield the best results from, probably, both loom stops and tensile strength viewpoints. However, the better result does not necessarily indicate that that particular stretch is the optimum. The whole procedure must be gone through again in the direction which the results of the first test indicated to be correct. Even a third test procedure may be necessary to finally determine the optimum stretch but the benefits gained by the testing will certainly be great enough to justify the effort. To cite results, which are by no means average in any respect, of one such series of tests a fabric made of 10s cotton warp yarn was found to be 30 per cent stronger when the slasher stretch was lowered from 3.0 per cent to 1.75 per cent. Attendent improvements in loom efficiency were also noted in this case. No condition was changed other than the slasher stretch.

Whichever stretch proves to be the best, a standard should be established. Realistic limits must, of course, also be set. However, once these conditions are factual, routine testing of the slasher should be undertaken to render the assurance that the same conditions exist at all times.

Size Viscosity

Size viscosity is another feature in the operation of a slasher room which should be held to prescribed standards. Sizes of different viscosities will penetrate the yarn in varying degrees. The maintenance of best conditions is dependent on the ability to hold the size viscosity at a constant level from mix to mix and from warp to warp. Warp yarns with varying degrees of size penetration will not have the same properties and naturally will not perform in the same manner on the looms. These facts are self-evident.

There are several methods for determining the specific

Why Use New Equipment? SEE PAGE 55

viscosity of a liquid. Some of the methods are quite accurate but require considerable equipment to perform. The method outlined here is intended for individual mill use and will not be accurate in comparing results with other mills. The equipment required is common and inexpensive. However, if the test is performed regularly and faithfully under, as nearly as possible, the same conditions, there is good reason to suspect that adequate results will be obtained. The equipment necessary for the test is a glass tube similar to the one shown in Fig. 1 and a stop watch. The glass tube has a bulb in the center and has two lines etched on its surface. A length of rubber tubing about a yard long should be slipped over the open end of the glass tube.

The operation of the test consists of the tester placing the end of the glass tube in the size box, while the slasher is running. The end of the rubber tube is placed in the tester's mouth and he should suck the size into the glass tube until its level is above the etched line in the bulb. Then by manipulation of his thumb over the end of the rubber tubing, the tester should make the level of the size in the bulb correspond with the etched line. Another tester standing nearby with a stop watch measures the length of time required for the size to drain out of the glass tube when the first tester's thumb is removed from the opening in the rubber tubing.

The result of the test is to obtain the exact number of seconds required for the drainage of the size. If other factors were known the specific viscosity could be calculated, however, for the actual mill performance tests this is not necessary. Knowing the time element involved in the drainage of the size will be adequate in keeping the size mix within standard if the standard is set in the same element.

Qualifying Factors

Some of the qualifying factors in the operation of this viscosity determination should be pointed out. One necessarily important factor is to be sure to make the sampling when the size is at the same temperature. The relation of size viscosity to size temperature is quite strong. Cool size of exactly the same proportion as boiling size will not have the same viscosity, naturally. The test should be run as near the middle of the running cycle of the size mix as possible. Obviously, freshly made size will not have exactly the same viscosity as a mix which has been running for a long time and may be ready to be dropped out. Care must be taken not to allow the size to remain in the glass tube until it has cooled to any appreciable degree. With practice the tester will be able to keep the period of time from when the size is sucked into the tube to when it is dropped out practically constant from test to test. This is an important point and should be pursued by the test operator.

One other factor concerning this test should be pointed out and it is that the test operator should take considerable pains in not drawing the size into the tube too rapidly. This could result in filling both the glass tube and the rubber tubing and splashing hot size into the tester's mouth or face. If, however, the size is drawn into the tube carefully and at a moderate speed there should be no danger of getting a mouthful.

S.T.A. Panel Discussion On Weaving

A feature of the Spring meeting of the Piedmont Division of the Southern Textile Association last month was a panel discussion on weaving. The discussion was led by C. S. Willard, chairman of the Piedmont Division and superintendent of Pacific Mills, Rhodhiss, N. C. Participating in the discussion were Bernard L. Coleman, Pacific Mills, Rhodhiss; Thomas P. Pruitt, Carolina Mills Inc., Newton, N. C.; and Raymond A. Sharpe, Crompton & Knowles Corp.

Chairman Willard: Which of you gentlemen have had experience with overhead loom blowers? What are the advantages?

Mr. Coleman: The looms are generally cleaner than when they are blown by hand and the cleaning cost is lower. You will not have the interruption you have when blowing off by hand and better quality cloth is a natural result.

Chairman Willard: Do you save any labor?

Mr. Coleman: We had three blowing off hands and eliminated all of them.

Chairman Willard: In trying to utilize the loom blower for quality improvement, have you noticed any problems of blowing lint from loom to loom that would cause contamination in the weave room?

Mr. Coleman: No.

Mr. A: I would like to ask Mr. Sharpe to give us a description of the new Crompton & Knowles automatic loom.

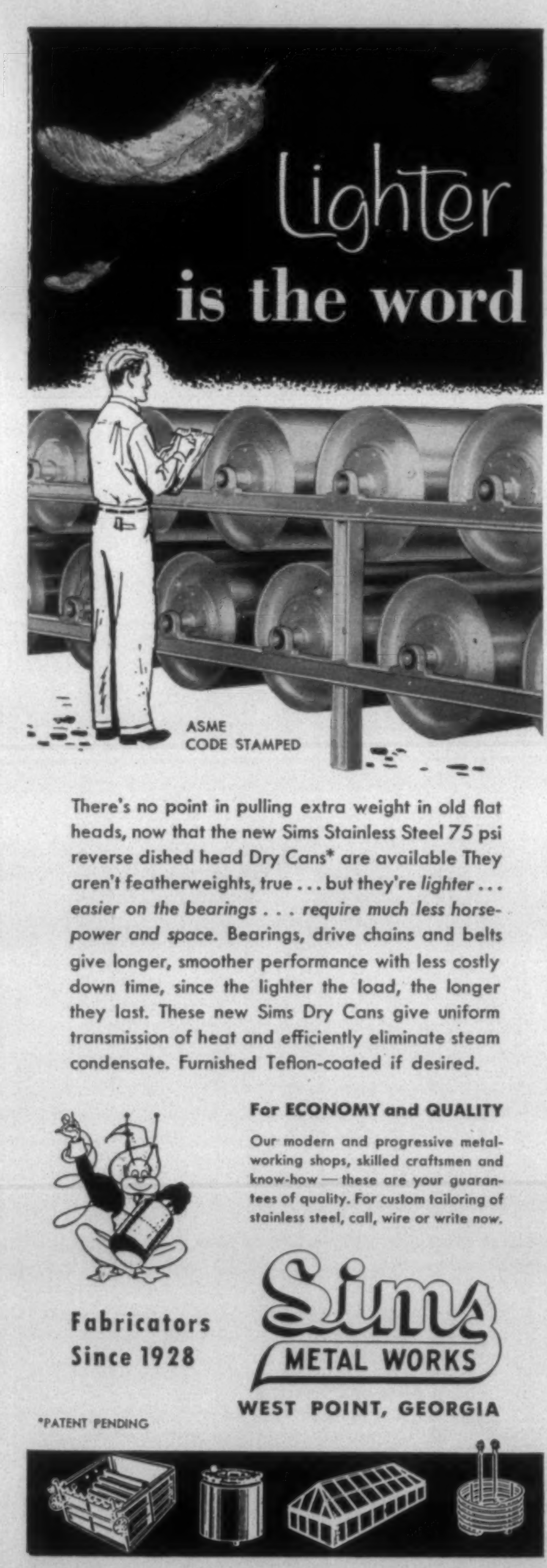
Mr. Sharpe: This loom in reality is not a 100 per cent automatic loom on all types of pick and pick fabrication. We can operate on many types of fabric automatically. Perhaps some of you are familiar with C&K's Tri-Color loom. This particular loom is what you might call a prolongation or adaption of the Tri-Color loom, with improvements. The Tri-Color loom, as such, means three colors and normally makes what we call a round-house weave. It runs red, white and blue, for instance, all through the cloth. But, here we have a loom in which more than one shuttle color can be had and any of them can be called upon. One shuttle can be stored. Our problem in the past has been that we could not store a shuttle.

On this particular loom we have three boxes, as it were, under the magazine. Actually the top box is separate from the other two boxes and this box alone comes up to the magazine at the time of transfer. Normally, on an automatic loom with a feeler, the feeler is what we call "live" at all times. On this loom we make the feeler live only when we want it to feel. The feeler is actuated only at certain times.

Normally, when a transfer is indicated the shuttle goes under the magazine; the bobbin is put in the shuttle; and the loom keeps running, of course, but the transfer is made on the inactive shuttle. It is a rather complicated mechanism to describe because there are a lot of electrical connections, etc., that enter into the system but in reality it is very simple in operation. Ninety per cent of the men's wear and women's wear can be woven automatically with a corresponding reduction in cost. For instance, in some mills weavers are operating five or six looms. In some instances there are 12 to 14 looms per weaver, and more depending on the style and fabric.

Chairman Willard: What about maintenance cost on these looms?

Mr. Sharpe: Actually, we do not have any figures on that be-



There's no point in pulling extra weight in old flat heads, now that the new Sims Stainless Steel 75 psi reverse dished head Dry Cans* are available They aren't featherweights, true . . . but they're *lighter . . . easier on the bearings . . . require much less horsepower and space.* Bearings, drive chains and belts give longer, smoother performance with less costly down time, since the lighter the load, the longer they last. These new Sims Dry Cans give uniform transmission of heat and efficiently eliminate steam condensate. Furnished Teflon-coated if desired.

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*PATENT PENDING

cause we have only a few of these looms in operation. We are not in line production yet but we hope to be by the last of this year or by 1958.

Question: What about the Select-A-Pic?

Mr. Sharpe: On the Select-A-Pic we can store the shuttle.

Question: In slashing a warp where you have three or four different blends how do you distinguish one from the other? Suppose you have two size boxes and four blends.

Mr. Sharpe: In most instances I believe tints are used.

Mr. B: That is correct but you have only two size boxes.

Mr. C: At different times we run two different tints in the size box when running two different yarns. If we want to bring the color up in one we will put tint in one section of the size box and leave the other plain or we can put tint in both sections. The only drawback is that sometimes one sheet of yarn has to go through one squeeze roll and the other through more than one. However it works out fairly well and allows another possibility of bringing the yarn up to different shades.

Mr. Coleman: Do you run one yarn through the squeeze roll and the other down under the immerser?

Mr. C: We run them both through the immerser. But we take up one sheet of yarn after the first squeeze roll and the other goes through the second squeeze roll.

Chairman Willard: It applies a second tint?

Mr. C: No, more of the same tint is applied which gives the yarn a deeper shade.

Chairman Willard: What is your experience with running nylon loops on shuttles instead of fur?

Mr. Pruitt: We found the friction created was so great that it melted the nylon.

Chairman Willard: Do you use fur at the front of the shuttle?

Mr. Pruitt: No, we run bristle at the front.

Chairman Willard: Do you have many shuttles running on that?

Mr. Pruitt: All of them. We put one loop about two-thirds of the way down on the back wall and then a pair of bristles.

Chairman Willard: Are you on all-cotton work?

Mr. Pruitt: Yes, and it is all pretty coarse work.

Chairman Willard: Do you have any problem with variation of tension?

Mr. Pruitt: Not very much, the greatest variation comes at the bottom. I think some mills have had success with the filament loops —limp filament loops.

Chairman Willard: What is your experience with the so-called plastic shuttle as compared with the dogwood shuttle?

Mr. Pruitt: We find there is an increase in the life of the shuttle but it increases the maintenance cost on the boxes.

Mr. Coleman: We found we could take power off the loom.

Mr. Pruitt: We have a peculiar situation. We are running a rather large package. In fact, we have to go to the back of the box and bore out our binder bushing to get that shuttle in. Due to the size of the package, with all the power we can get off the loom we still have more power than is desirable to lower maintenance cost and cut down on wear.

Mr. Sharpe: What is the comparison of the life of the plastic shuttle versus the dogwood shuttle?

Mr. Pruitt: We have four plastic shuttles that have been running about 22 months. From non-treated dogwood we get about six to eight months' life. With treated dogwood, Durawood, we get about three months' increase in the life of the shuttle. It costs about 50 to 60 cents more than plain dogwood.

Mr. D: Is it the consensus of opinion here that the Page check strap will speed the looms up?

Mr. Coleman: We have had them on our looms eight months and have never had to touch them with a screwdriver to adjust them. They stand over weekends, etc., but we never have to adjust them.

Chairman Willard: Comparing the most complicated operation on synthetics with a plain operation, do you keep your loom assignments on a steady rate?

Mr. Pruitt: Yes, we do.

Chairman Willard: What is the assignment on 80-square?

Mr. Pruitt: We are not on an 80-square but it depends on the type of loom and the speed of the loom. I have known them to go as high as 146 looms per weaver on X-2 looms running at 180 picks per minute.

Bleaching, Dyeing & Finishing

Textile Applications Of Radioactivity

By IRVING A. BERSTEIN, Tracerlab Inc., Waltham, Mass.

Excerpts from an article by Irving A. Berstein, head of the chemistry department at Tracerlab Inc., show that pioneering work has been started in applying radioactivity to problems in the textile industry. Here are some practical applications which are feasible and available for immediate use.

RADIOACTIVE materials have been known to occur in nature for some 60 years, but by far the most important applications of radioactivity have been made within the last ten years when radioisotopes produced in nuclear reactors and accelerating machines became widely available. Radioisotopes of a large number of elements are now readily obtainable at moderate cost.

Nuclei of radioactive isotopes are unstable due to excessive amounts of energy and tend to reach more stable states by emitting radiations. The rate at which different radioactive materials give off these energies and become stable ranges from seconds and minutes up to billions of years. The term that is used to indicate how long the radioactivity remains before decaying away is called the "half-life," and this is the length of time in which half the radioactivity present will decay.

Types of Radiations

Three types of nuclear radiation may be emitted in radioactive decay:

(1) Alpha particles, which are helium nuclei, are weakly penetrating and emanate from the heavy elements. This type of radiation is, in general, of little interest in industrial applications.

(2) Beta particles, which are high-energy electrons, pentrate to a limited extent. Most important applications employ beta emitters.

(3) Gamma rays, which are high-energy rays similar in properties to energetic x-ray radiation, are extremely penetrating and some tracer applications make use of this property.

Methods of Detection

There are three important methods of radiation detection. The method that is most commonly used is a gas-filled detector such as a geiger tube, an ionization chamber and a flow counter. These three detectors operate on the same basic principle. In general, they are all cylindrical in shape and contain a center-wire anode with a large voltage difference placed across the wire and the sides of the tube. When nuclear radiation penetrates into the counter, it causes ionization in the gas resulting in the formation of electrons. In "ionization chambers" the electrons are collected at the anode and measured as a current. In "geiger tubes" and "flow counters" where a larger potential difference is placed across the counter, electrons are accelerated to the anode intersecting with the fill gas causing further ionization. Finally an "avalanche" of electrons is collected at the anode giving rise to an electrical pulse which can be recorded. One such pulse, or count, results from each initial intersection in the gas-filled detector. The pulses are totalized electronically in an instrument called a scaler.

A second method of radiation detection is the scintillation technique. The basis of this method is that when radiation interacts with certain materials, called phosphors, fluorescent light is emitted. This light is allowed to impinge on a photomultiplier tube which converts it into an amplified electrical signal. The pulses are then totalized electronically with a scaler in the same manner as with gas-filled detectors. Both solid and liquid fluorescent phosphors have been used.

A third technique which is not as quantitative as the above two but which is more sensitive is photographic emulsion. This method would be used for determining the location of very small amounts of radioactivity in a sample. The sample is placed next to a photographic film and the radiation causes an image on the film. This technique is called radioautography.

Practical Textile Uses

Undoubtedly, one of the most successful applications of tracer techniques to textile problems is the quantitative evaluation of the durability of a finishing agent, such as resins for water resistance, crease resistance, etc. Although the finishing agent may be a mixture, the main component is an organic polymer which can generally be readily synthesized using radioactive carbon-14. The carbon-14 tagged compound can be incorporated into the finishing agent mixture and applied to the fabric in the same manner as done in the normal operation.

The fabric can then be submitted to washing or dry cleaning treatments and the radioactivity measured to determine the per cent retention of the labeled finishing agent. The fabric can then be submitted to repeated treatments and radioactivity measurements performed after each treatment. The tracer technique is uniquely powerful for such measurements, and the highly refined synthetic procedures currently available for the preparation of labeled compounds make the labeling of any textile finishing agent feasible.

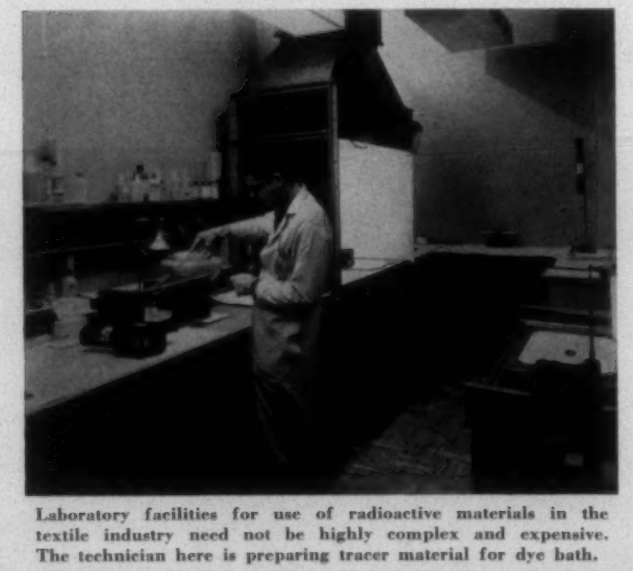
This method has been applied with marked success by L. Shapiro in the testing of aqueous polyvinylactetate emulsion finishes used as "synthetic starch." He was able to evaluate the effects of the initial concentration of polymers and length and number of washings on the per cent retention of the polymeric finish on fabric.

Detergency Testing

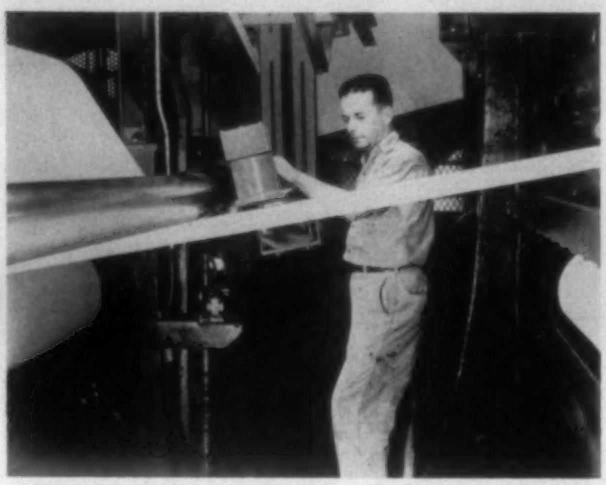
Another successful testing method based on the tracer technique that is very similar to the durability tests is the testing of effectiveness of detergents. Here synthetic radioactivity-labeled soiling matter is applied to the fabric and the radioactivity content determined after successive washings in exactly the same manner as in durability tests. The radioactive technique is more reliable and considerably more sensitive than other methods used in detergency testing such as light reflectance measurements on soiled cloth or light transmission of wash water.

A number of different types of radioactive soils and bacteria have been prepared using a variety of compositions and radioisotopes. Typical compositions which have been successfully employed include the following: (a) a buffered chromium phosphate (P-32 labeled) suspension which is combined with ordinary soil or grease; (b) a bacterial suspension tagged with P-32 which can be mixed with ordinary soil; (c) a synthetic soil consisting of 15 components including humus, fatty and colloidal substances, iron oxide and carbon-14 labeled carbon black; (d) an admixture of radioactive fission products aged for six months or longer and inactive synthetic soil; (e) vegetable oils containing carbon-14.

An article by J. W. Hensley and co-workers describes techniques of preparation of "soiled" cloth, radioactivity measurements, wash test procedures and equipment. They thoroughly discuss and compare results of tracer methods with more conventional methods and conclude that there is no "typical" nature soil and, therefore, completely reliable tests of performance would require use of a variety of test soils and methods of application. They state that the tracer method "appears to give evaluations free of some anomalies that have been recognized in conventional laboratory tests."



Laboratory facilities for use of radioactive materials in the textile industry need not be highly complex and expensive. The technician here is preparing tracer material for dye bath.



A Beta gauge being used as an inspection unit on a finishing range. The gauge measures the wet pick-up. For best results, except with exceptionally uniform cloth, two gauges are generally used with one before and one after wetting out.

Plant Process Control

A potentially very powerful and widespread application of radioactivity to automatic plant process control is the use of beta gauges in the control of addition of finishes and coatings in padding operations. Beta gauges are devices developed to continuously measure the weight per unit area of sheet or web-like material without contacting the material being gauged. If a fabric passes through a process in which it picks up appreciable additional wet-weight (about 30 to 40 per cent of initial weight) beta gauge measurements can be calibrated to indicate up-take.

The response changes of the beta gauge can be utilized to actuate equipment for the automatic control of processes. Examples of applications in which accurate, continuous wet-weight uptake control could be of extreme value are: coating of fabrics with resin finishes; the preparation of unwoven fabrics by binding of matting with resins; and coating of fabrics with latex or vinyl plastics. Calculations have been made on measurement of impregnated fabrics which indicate wet-weight uptake can be readily measured and controlled within a precision of plus or minus five per cent of the wet-weight of coating. Generally two gauges are utilized—one to measure the base fabric and one to measure fabric after uptake. If the base stock is sufficiently uniform, it may be possible to achieve a precision of plus or minus five per cent using only one gauge to measure the uptake and not gauging the base fabric.

It is in applications such as this that the most immediate application of radioactivity to control of process operations is foreseen, since the radioactive material is completely contained and encapsulated and is very simple to employ. The practical use of beta gauges in a variety of operations has been demonstrated with no special problems being encountered due to the radioactivity.

Principles of Beta Gauge

The basic principles of operation of beta gauges are relatively simple. There are two tpyes of gauges—"absorption" and "backscatter." The most commonly employed type of gauge and the one that would probably be used for the applications cited above is the "absorption" gauges. In this case an encapsulated radioactive material—such as strontium-90, krypton-85, cesium-137—is placed on one side of the sheet material and a radiation detector such as an ionization chamber placed on the other side. The amount of the radiation absorbed is a function of the weight per unit area of the material being measured, and the response of the radiation detector can be so calibrated. The particular radioisotope to be used is chosen on the basis of the thickness of the material being gauged—the thicker the material, the more energetic should be the radiation.

"Backscatter" gauges have the radiation source and detector in one unit on the same side of the sheet material. Essentially the same principle is employed here as in the absorption gauge except in the "backscatter" gauge the radiations penetrate the sheet material, reflect off a backing plate, and are then backscattered through the material before being measured.

Eliminate Static Electricity

As mentioned previously, whenever nuclear radiation interacts with matter ionization is produced. This property of radiation can be utilized to eliminate static charges accumulated by yarn or web as a result of friction since the ionization in the air acts to neutralize static charge. Static problems are most acute with nylon and rayon acetate fibers particularly in atmospheres where the relative humidities are low since leakage of static charge through a dry atmosphere is minimal.

Radioactive material such as a beta emitter—strontium-90, krypton-85, or thallium-204, or an alpha emitter—polonium-210—is hermetically encapsulated in a source comparable to those used in beta gauges. Therefore, operational problems associated with the handling of the radioactive material are minimized since the radioactive material is completely enclosed.

The radiation sources are mounted within an inch or two of the charged surfaces to utilize most efficiently the densely-ionizing ability of the alpha or beta radiation. Gamma radiation sources are not employed for such purposes since the radiations are too penetrating and are not sufficiently densely ionizing unless present in quantities too large to handle conveniently.

Ultrasonic Emulsifiers

Sound Waves At Work

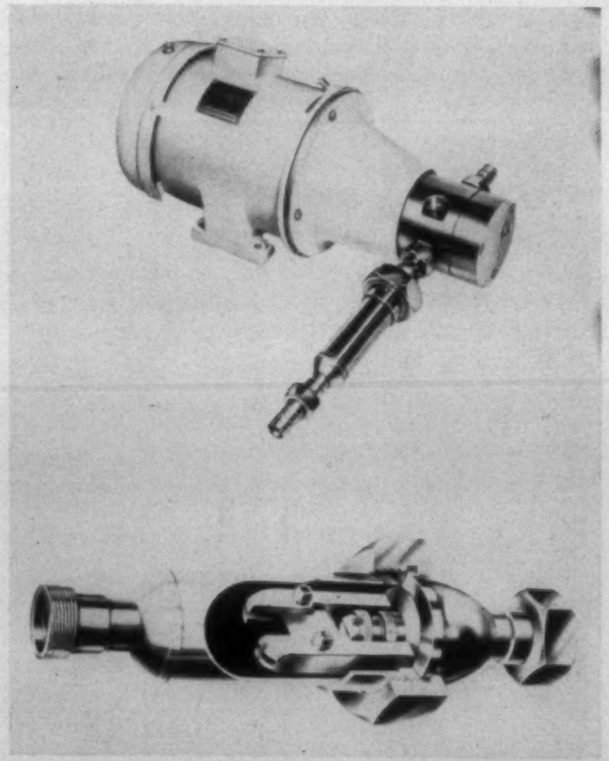
The liquid produces the sound wave in Sonic Engineering Corp.'s new sonic emulsifying equipment.

A NEW principle, using the fluid-dynamic forces in the liquid itself, has been incorporated in the ultrasonic emulsifiers developed by Sonic Engineering Corp. of Stamford, Conn. The generation of ultrasonic energy inside the liquid is accomplished by impinging the liquids to be emulsified in a jet stream on the edge of a blade. The blade vibrates at its natural frequency (about 22,000 c.p.s.). Cavitation occurs continuously in the stream rushing past the blade. All energy is developed and used right in the liquids.

Uses in emulsification of waterproofing, bleaching, lubricating and paraffin wax-proofing compounds have been successful. Dye dispersions, wool creams, printing binders, sizings and titanium dioxide dispersions are also reported to have been satisfactorily emulsified using the new principles.

Rapisonic

The Rapisonic consists of a gear-type pump and an ultrasonic head driven by a two-horsepower motor. It has an output up to 350 gallons per hour and handles emulsions of high and low viscosity. The device produces a homogenous fluid and no pre-mix is necessary. The Rapisonic will not incorporate air during sonification. It is easily



The Rapisonic, a device consisting of a gear-type pump and an ultrasonic head driven by a two-horsepower motor with an output of up to 350 gallons per hour. This equipment is a development for the original unit first tested in 1951 in England.

bolted or clamped to any firm support near the processing vessel.

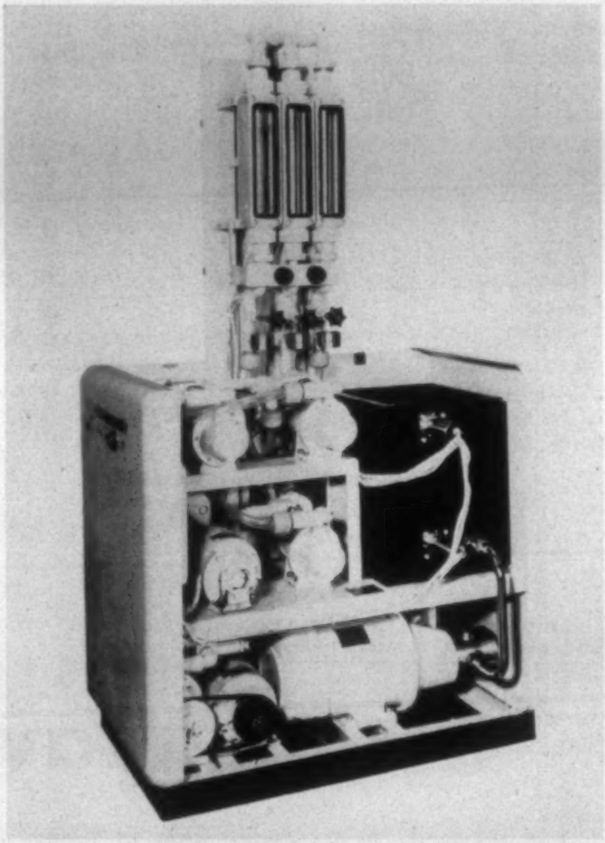
Autosonic

The Autosonic emulsifier meets the need of a continuous supply of emulsion automatically geared to process volume. The oil, water and emulsificant are pumped separately into the device through three control valves and flow-rate indicators in order to adjust the proportions of each in the final emulsion. Float switches maintain a balance in a reservoir by starting and stopping the feed and discharge pumps as well as the emulsifying unit. The Autosonic incorporates the Rapisonic emulsifying unit.

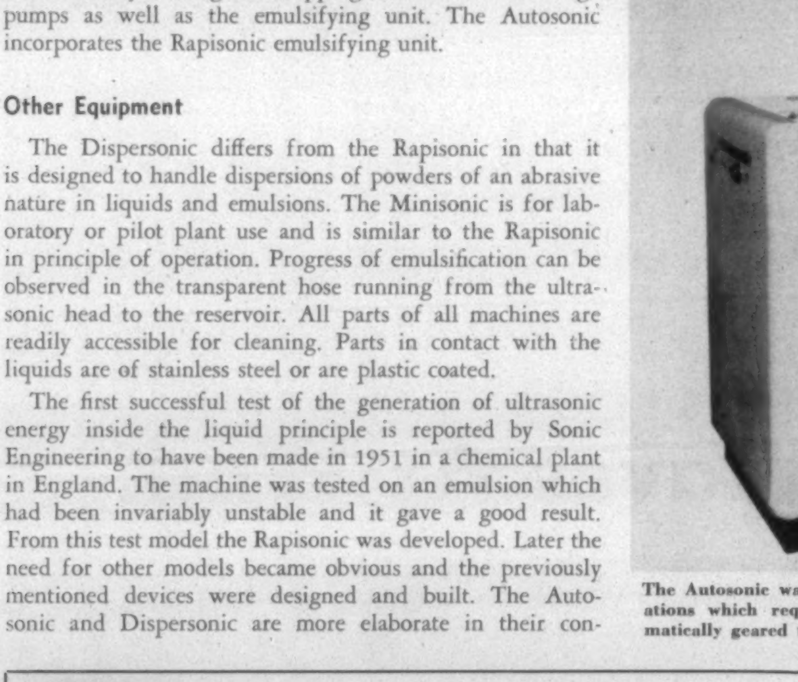
Other Equipment

The Dispersonic differs from the Rapisonic in that it is designed to handle dispersions of powders of an abrasive nature in liquids and emulsions. The Minisonic is for laboratory or pilot plant use and is similar to the Rapisonic in principle of operation. Progress of emulsification can be observed in the transparent hose running from the ultrasonic head to the reservoir. All parts of all machines are readily accessible for cleaning. Parts in contact with the liquids are of stainless steel or are plastic coated.

The first successful test of the generation of ultrasonic energy inside the liquid principle is reported by Sonic Engineering to have been made in 1951 in a chemical plant in England. The machine was tested on an emulsion which had been invariably unstable and it gave a good result. From this test model the Rapisonic was developed. Later the need for other models became obvious and the previously mentioned devices were designed and built. The Autosonic and Dispersonic are more elaborate in their construction and were designed to fill American production requirements. The other two devices are said to have been altered for use in American operations.



The Autosonic was developed to meet the need of textile operations which require a continuous supply of emulsion automatically geared to process volume.



SANDOZ INC. NOW HAS IN FULL OPERATION its new district office at 4000 Monroe Road, Charlotte, N. C. With fully equipped laboratories, the new facility is designed to take immediate and long range dyeing problems off the shoulders of the dyehouse superintendent or chemist. Laboratory equipment—such as the Gaston County package dyeing machine and extractor shown here—is used to develop procedures and formulations which can be transferred readily to production machines in the mill. Heading up the new Charlotte office is Frank P. Mackinney, district sales manager for Sandoz.

Maintenance, Engineering & Handling

Automatic Control Methods Of Electrical Speed Drives

By LEO WALTER, Consulting Engineer

Requirements for various types of motors for specific applications and illustrations of nine synchronous drive systems are contained in this article.

MECHANICAL characteristics of the load are probably the factors which require most consideration in selecting both the motor and the rest of the adjustable speed drive. The horsepower rating which is to be transmitted by a drive often definitely rules out certain types. The value of 75 h.p., for example, is about maximum for a variable pitch pulley unit. Extreme values are limited to normal torque motors within a narrow speed range. On the other hand, eddy current clutches, which are actually controllable slip motors, can be obtained for any reasonable load. At the other extreme, in the small fractional horsepower motor sizes, the variable voltage type using d.c. motors is more frequently found and the m-g set used in higher power applications is replaced by a voltage control and rectifier. Other types include series motors and motors with governors. In the medium power range, all types are generally found although the limits covered by individual manufacturers may vary.

Torque

The normal, or steady, torque conditions are usually well taken care of by manufacturers' ratings for horsepower and speed ranges for each size of unit. However, there are often unusual conditions which must be considered. Some loads have intermittent peaks that may exceed the rated motor power two or three times. In a constant speed drive the inertia and the reserve power of the motor might be depended upon to carry the momentary load. With an adjustable speed drive, the inertia of the rotating parts connected directly to the load, the capacity of the torque transmitting system and the capacity to supply either rotating or electrical power to transmission or variable speed motor must all be considered.

In some instances it may be preferable to absorb the peak loads in the adjustable speed system so that they do not reach the power supply. In this case, a system which allows speed to drop as rotating energy is used, will be indicated. If speed must be held steady in spite of the load increase, a positive transmission or some method of increasing torque must be used. The extra power must be taken from the supply lines unless an adequate amount can be stored in a flywheel.

Basic Speed

Operating speed and torque are closely allied but other factors may enter into speed limitations for various drives. For example, in variable pitch pulley units, belt heating, vibration and pulley radius become important at the higher speeds even though torque is reduced for the same power. Similarly, in electrical equipment, maximum speeds may be limited by centrifugal forces on the rotors and minimum values by commutation and space problems.

Manufacturing economics determines the torque and speed limitations of available drives and the values at which gears or other means are introduced as auxiliary but fixed methods of obtaining extra reduction or increase of speed. While the over-all cost of a given type of drive may be reduced by using gears for low speeds, other types may not require them for that particular range. This provides a cheaper installation. For particularly heavy load and speed, a slow speed synchronous motor and direct drive eddy current clutch may provide a more satisfactory unit than other types requiring gear reduction.

Accuracy of speed setting and control with which given equipment must operate is all too often a hazy figure influenced by specifications. Machine cutting speed or pumping speed, for optimum results, may be specified to three figures without operating limits when actually variations of ten to 20 per cent above or below could be readily tolerated. Thus, for the majority of applications, the amount of variation permissible is the more pertinent question.

In general, individual operations will permit rather sizable speed variations although in some the average value should be maintained. For these loads, the simpler adjustable speed drives are not only adequate and least expensive but also more easily maintained. In many other instances, speed must be more or less closely synchronized either with another speed or another parameter involving rate. Allowable variations in this class may extend all the way from a few per cent down to a fraction of one per cent. Limits imposed must be reflected in the capabilities of the drive. An additional factor, the effect of voltage variations in the plant power supply on the prime mover of the adjustable speed system, should also be noted where highest accuracy is needed. Response time, or the time required for the speed to recover from momentary dips, also varies with different drives. Knowledge of the allowable limits for the particular application may therefore be necessary.

Speed Range

Speed range to be covered, as well as the number of steps in the range required by the load or operation, are necessary in specifying type of drive. It is possible that, in instances where a wide range but only a limited number of steps are required, a multispeed motor or gear shift transmssion will yield better results than an adjustable speed unit. Where an infinite number of steps are required, extreme accuracy within a very limited range between maximum and minimum speeds to very wide ranges are necessary.

Normally, requirements for speed variation fall within a range of maximum and minimum values which has a fairly low ratio of perhaps 4 to 1. The majority of adjustable speed drives are suitable for the purposes. However, specialized types must be used to cover wide range requirements. Accuracy required of speed values at extremes of the range should be given particular consideration. Particular attention should also be given to requirements at very low speeds or if the speed is to be varied under stable conditions to or through the zero value. Although many drives provide forward and reverse operation, few of them permit smooth adjustment near zero.

Reduced speed duration and torque will vary greatly with different loads. Many applications operate almost continuously at a given base speed but require reduced speed settings for a small fraction of the time. A wound rotor motor, although quite inefficient at low speeds, might well be satisfactory if it met other requirements. In this case over-all power costs would be relatively low because of the limited duration of low speed operation. Other types may have much lower operating costs for a high percentage of reduced speed operation.

Drive And Load Characteristics

Setting speed means choosing a curve rather than a particular value. Basic speed characteristics of motors involve fundamental theories of electric motors and affect results on the bulk of the adjustable speed equipment in use. It is the inherent inability of the simple motors and systems to maintain a truly constant speed that makes feedback equipment necessary in specific cases.

Speed control characteristics for several values of constant torque load are shown in Fig. 1. It is introduced here primarily to call attention to the difference between control curves and the speed-torque curves which represent reaction to load conditions rather than control settings.

Multi-Motor Control

Various systems have been devised for speed and synchronization control of shunt-wound electric motors of both the direct current and polyphase induction types in multi-motor drives. These drives demand interdependence and interlocking of several motor-drives. It may be necessary to maintain a certain tension on a web of material during processing or perhaps a change of tension for filaments may be required. In other instances a certain loop between two rotating cylinders may be required.

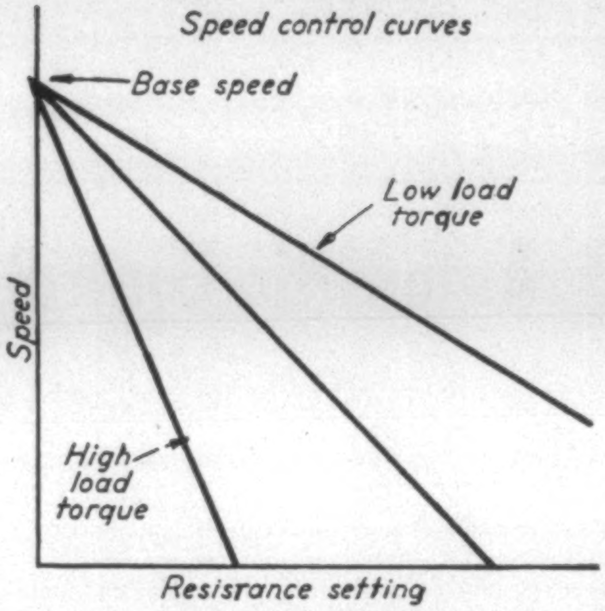


Fig. 1—Speed Control Curves.

The target is usually to achieve a very accurate gradual change of speed of rotation by the use of either d.c. or a.c. motors with commutators. The main problems are supply, control of speed of rotation and regulation of operation. Fig. 2 illustrates a textile washing range having a multi-motor drive for the various sections. The basic rotating speed of all d.c. motor-drives is controlled by a Ward-Leonard scheme. Speed control of the various d.c. motor drives is performed by means of weight-rollers acting on

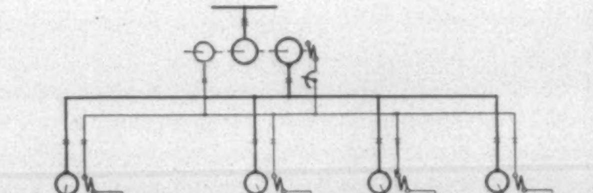
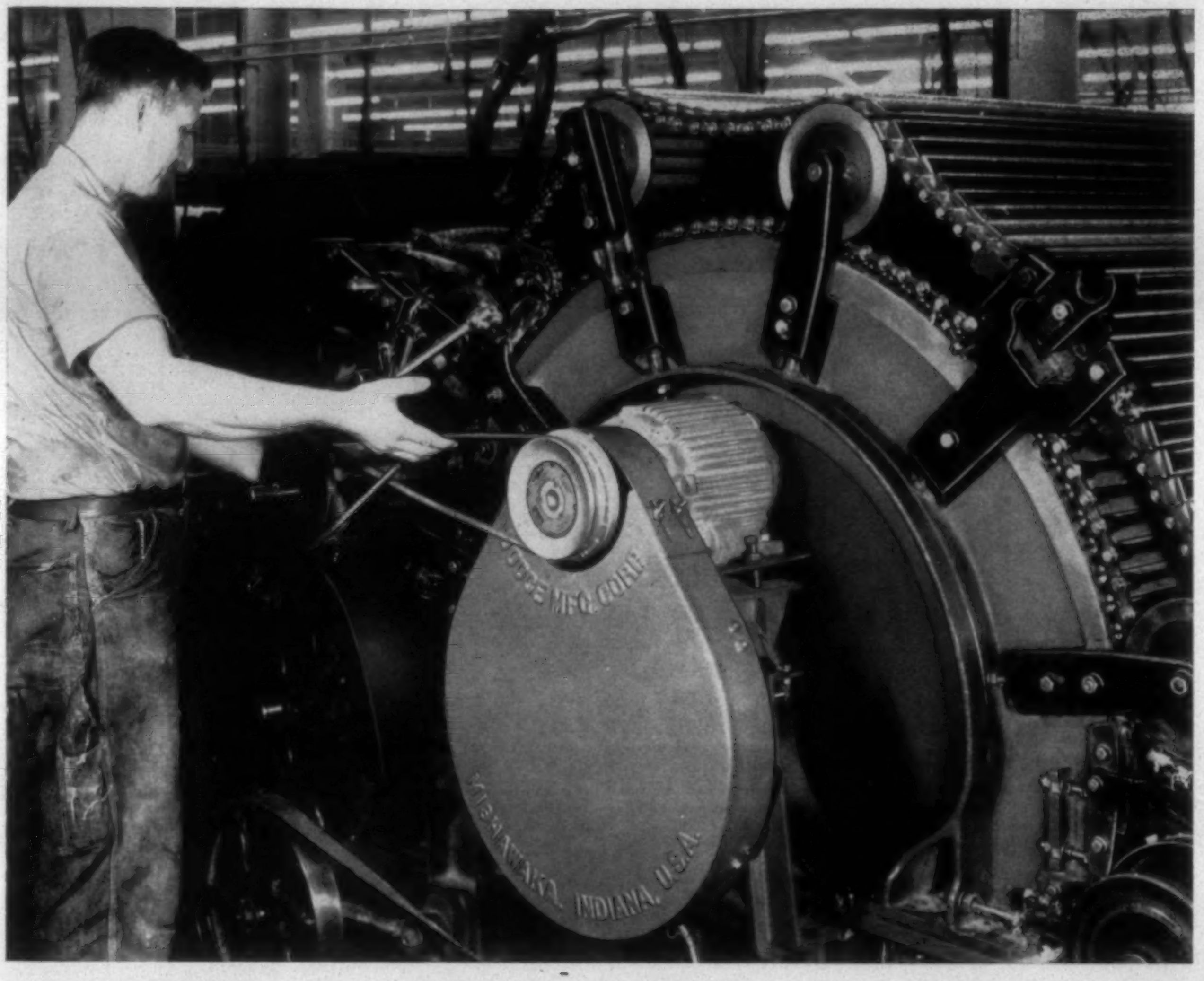


Fig. 2—Ward-Leonard multi-motor drive for washing range.

Why Use New Equipment? SEE PAGE 55



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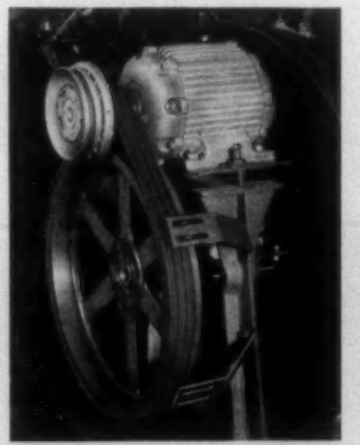

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the motor field. There is in use a control of the basic speed for each motor.

There are instances of heavy load fluctuations, such as for textile printing machines, tenter frames and continuous bleaching equipment, where field regulation becomes difficult. In these applications a.c. shunt motors are useful.

A few common a.c. control methods for synchronization of multi-motors are shown in Fig. 3. Example 1 is a weight-loaded suspended roller, producing a vertical mechanical impulse with change of length of the web, or caused by deviation of rotating speed of neighboring rollers. This vertical movement is usually transformed into rotation applied to corrective field changes. The advantage of the suspended roller is the constant stretch of the web of fabric achieved by load weight. Example 2 is a more modern weight balance roller design, requiring less space. Example 3 replaces the weight load by a spring load. Example 4 is a design for a mercerizing range in which the suspended rolls prevent the fabric deviating from its width. Example 5 illustrates a movable storage section, which alters position according to filling rate. Mechanical or electrical contact control is applied to regulation of the motor drives. Example 6 is used for photoelectric loop control. Example 7 shows a system using contact between fabric and two oblique isolated sheets. A proportional control method is used. Example 8 is for mercerizing machines in the form of electrical ratio control of two rollers. Example 9 shows an approximate method based on differential of current loads which is not necessarily a precise indication of fabric stretch.

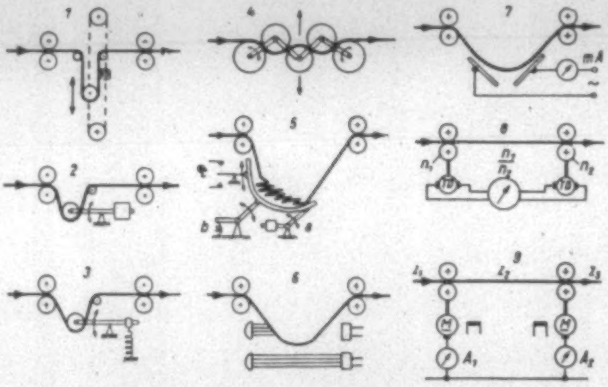

Fig. 3—Examples of various synchronous drives.

Food Is Factor In Accidents

A survey was made by the North Carolina Industrial Commission's safety division of one large textile manufacturing plant to find out the effect that proper food has upon accidents. The survey covered a 24-month period during which the plant had an average of 1,535 employees. All accidents that required first aid were considered. The investigation showed that approximately 75 per cent of the accidents happened to workers who had not had breakfast. The largest number of injuries occurred at ten o'clock in the morning. This was believed to be due to the fact that the workers on the second shift took more time in preparing breakfast and lunch before going to work.

Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

PERSONAL NEWS

W. M. Pittendreigh

W M. Pittendreigh of Riegel Textile Corp., Ware Shoals, S. C., has been named director of research and development for the company. Mr. Pittendreigh, chairman of the board of governors of the Southern Textile Association, was formerly superintendent of Riegel's cotton mill operation at Ware Shoals. Succeeding him in that position is W. A. Pearson, preparatory superintendent at the company's Trion (Ga.) Division since 1954. Prior to transferring to Trion in 1954, Mr. Pearson was assistant superintendent of the cotton mill at Ware Shoals.

Arthur F. Happe, special assistant to controller of Celanese Corp. of America, has received an award for completion of 25 years service with the company. A native of Ascot, England, he received his formal education at Springfield College, Acton, England. He joined Celanese in 1932 at Cumberland, Md., and was made plant accountant in 1938. In 1953, Mr. Happe was transferred to Charlotte as textile division controller which position he held until his new assignment in February 1957.

John R. Warren has been appointed superintendent of the contracting division of Panellit Service Corp. of Skokie, Ill. He will assume supervision of all instrument system installations. Previously with the Du Pont Co., Mr. Warren has been with Panellit almost two years.

Kenneth C. Beene has joined the Chemstrand Corp., Decatur, Ala., as a public relations representative. He was formerly Alabama manager for United Press, supervising the state-wide news operations of the wire service from the Birmingham United Press bureau. Mr. Beene is a graduate of the University of Tennessee, having received his degree in journalism in 1952.

Joseph Jervis Jr. has been appointed plant manager of Bigelow-Sanford Carpet Co.'s Bristol Mills at Bristol, Va. Mr. Jervis is a former plant manager of the Pine Tree Co. of Dahlonega, Ga. Mr. Jervis succeeds George H. Buckles, who recently supervised the plant through an expansion program that has approximately doubled its production capacity. Mr. Buckles plans to retire in 1960 and recommended the appointment of his successor at this time to assure continuity of authority and production. He will remain at Bristol as assistant and advisor to the plant manager and will direct personnel activities, purchasing, training and community relations. During World War II, Mr. Jervis served with the U. S. Navy in the Mediterranean and European theaters and was discharged holding the rank of lieutenant commander. He is a graduate of Pennsylvania State University.

Charles G. Chase has been made resident area manager for South America for Pan Amcel Co. Inc., an export trade affiliate of Celanese Corp. of America. His headquarters will be in Santiago, Chile. He was previously manager of customer service for Pan Amcel and his headquarters were in Charlotte, N. C. Prior to joining the company in 1953 as a technical service representative, Mr. Chase was associated with J. P. Stevens & Co. Inc. He is a graduate of North Carolina State College where he received a B. S. degree in textile manufacturing.

James B. Curley, American Viscose Corp., has been elected chairman of the textile division of the American Society for Quality Control at the 11th annual convention of the society. He was previously a district counsellor. Mr. Curley is a charter member of the division, having joined the group in 1950. He is active in the D-13 committee on textile materials of the American Society for Testing Materials. In addition, he holds membership in the American Association of Textile Chemists & Colorists. . . . Other officers elected at the meeting were: Kenneth Edgar of Henderson, Lindsay & Michaels, Greenville, S. C., vice-chairman; Byron R. Griffin, West Point (Ga.)

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Precision Cut . . . on the latest and most accurate equipment. Thickness controlled to tolerances of less than 3/1000 inch.

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PERSONAL NEWS

Mfg. Co., secretary, and Robert G .Mitchell of International Latex Corp., Dover, Del., treasurer. . . . District counsellors elected were Dave Scott Jr., Scott Testers Inc., Providence, R. I.; Braham Norwick, Beaunit Mills Inc., New York City; George M. Bornet, Ontario Research Foundation, Toronto, Canada; Robert M. Kennedy, U. S Army Quartermaster Inspection Service Command, Philadelphia, Pa.; M. J. Rarick the Du Pont Co., Seaford, Del., and James E. Mitchell Jr., Avondale Mills, Sylacauga, Ala.

Sanford Cluett

Sanford L. Cluett, inventor of the compressive shrinkage process for the pre-shrinking of cotton fabrics, has been honored by the American Society of Mechanical Engineers. The award was given at a meeting of the Schenectady, N. Y., chapter of the society on May 21. Mr. Cluett, vice-president of Cluett, Peabody & Co. Inc., has been made a fellow in the A.S.M.E., the highest grade of membership in the society, which is granted those who have "acknowledged engineering attainments." He is the holder of 195 patents in textile machinery and processing.

Jack T. Holt, purchasing agent for Erwin Mills Inc., Durham, N. C., was presented a certificate of appreciation by the National Association of Purchasing Agents during its convention in Atlantic City, N. J., recently. Mr. Holt is a retiring vice-president of the association.

W. W. Butterworth

Warren W. Butterworth has been appointed sales representative of Howard Bros. Mfg. Co. of Worcester, Mass. Mr. Butterworth will serve woolen and worsted mills in the South and parts of New York, New Jersey and New England.

John J. Dacey Jr. has been appointed to the post of sales promotion manager of the textile division of the U. S. Rubber Co., New York City. He has many years of experience in both manufacturing and retail promotion of textile products.

Foster McConnell, overseer of dyeing, has been named superintendent of the Gossett Dyeing and Finishing Plant at Anderson, S. C. He has been with the company since 1949. He graduated from Clemson College with a degree in chemistry and served as an officer in the U. S. Army during World War II.

John Procopi has been appointed sales manager of the Milton Roy Co. of Philadelphia, Pa. He has been manager of market development for the company for the past four years. He is a graduate of Columbia University with a B. S. degree in chemistry Mr. Procopi is a member of the American Management Association, American Institute of Chemical Engineers, National Industrial Advertisers Association, Instrument

AGRICULTURE DEPARTMENT HONORS RESEARCHER — Improvements in the processing and utilization of cotton have brought recognition to R. J. Cheatam of the Southern Utilization Research and Development Division of the Agricultural Research Service, U.S.D.A., in New Orleans, La. Mr. Cheatam, head of the cotton mechanical processing section, was recently presented with the Department of Agriculture Superior Service Award in ceremonies in Washington for accomplishment in his field.

Under Mr. Cheatam's leadership, a number of new devices have been developed for use in the textile industry including a cotton cutter to prepare cotton fibers for use in explosives; the S.R.R.L. cotton opener to facilitate cleaning of trashy cottons resulting from mechanical harvesting; the S.R.R.L. loom attachment for the weaving of extra dense cotton fabrics on standard looms; the S.R.R.L. slasher for more effective sizing of cotton warp; and the Retracto-Pin card stripper for continuous mechanical cleaning of the carding cylinder. Information has been developed under his leadership on the relationship of fiber properties to processing efficiency and on better control of neps. New roving draft guides and new roving twist formulas have also been developed for greater processing efficiency under his direction.

Several of these developments, such as the cotton opener, have already been widely adopted by the industry in this country. Other more recent developments are receiving serious consideration. Mr. Cheatam was cited for his leadership, organizational skill, creative scientific imagination, and exceptional initiative and judgment in directing a research program designed to maintain and extend cotton's position in present and new uses.

Society of America, American Marketing Association and Columbia Alumni Association. . . . H. Rodman Smith has been appointed assistant sales manager for Milton Roy Co. He has been associated with the company for five years starting as an application engineer and later was promoted to chief application engineer. He is a 1949 graduate of Lehigh University, receiving a degree in chemical engineering.

F. E. Grier

The Greenwood (S. C.) Chamber of Commerce has adopted a resolution conveying gratitude, admiration and respect to F. E. Grier, president of Abney Mills and chairman of the board of Erwin Mills, for service to "his community, church, state, nation and industry." Mr. Grier is the immediate past president of the American Cotton Manufacturers Institute. The resolution reads, in part: "It is a unique achievement to be chosen to lead the state organization of a large industry, but to be chosen immediately thereafter to lead the national industry organization of such a large segment of our economy as textiles is outstanding." The resolution concludes with: "He has furnished that leadership that arises out of crisis and concern, to bring order and progress out of pessimism and confusion. It is our pleasure to know and work with him and to acknowledge with pride his firm stewardship."

Thomas Starmont has been appointed plant and product manager of Stedco-Southern Inc. of Greensboro, N. C., textile bobbin subsidiary of Steel Heddle Mfg. Co. of Philadelphia, Pa. He was formerly product manager of the special products division in Greenville, S. C. . . . Walter Young has been appointed product manager of the throwing bobbin division of Steel Heddle Mfg. Co. in addition to his present capacity of superintendent of this division.

Henry M. Leigh has been appointed assistant to the controller of Diamond Alkali Co., Cleveland, Ohio. For the past 11 years he has been with the Clevite Corp. of Cleveland as budget director. He holds a B. S. degree in business administration from Indiana University and an M. B. A. degree from the Harvard University Graduate School of business administration.

Ben P. Robinson has been named personnel manager of the Riegel Mfg. Co. plant at Ware Shoals, S. C. He was formerly with Amerotron Corp., Anderson, S. C.

William D. Lawson has been appointed assistant director of the research division of the Du Pont Co.'s fabrics and finishes department. Mr. Lawson joined the firm in 1949 as a research chemist at the Marshall Laboratory in Philadelphia, Pa.

Oscar B. Schier II has been designated secretary-elect of The American Society of Mechanical Engineers by unanimous vote of the society's council. He will succeed Clarence E. Davies, who will retire as secretary after 23 years of service. The post of secre-

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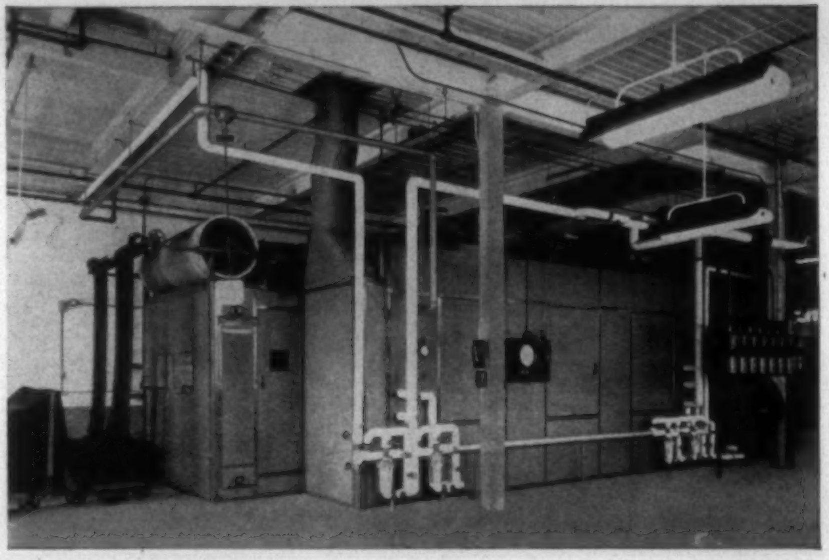
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tary is the chief administrative office of the 50,000-member society. Mr. Schier, who is 49 years of age, has been a member of the society since 1932 and a member of the staff in various capacities for the past 11 years. He was elected secretary in 1953 and advanced to the post of deputy secretary last December. He was graduated from Lehigh University in 1929 with the degree in mechanical engineering and received his master's degree from the same institution the following year. He was formerly associated with the Consolidated Edison Co. of New York City.

James M. Bailey has been named general manager of Kingsley Mill Corp., Thomson, Ga., and of Machias (Me.) Mill Inc., in addition to his duties as vice-president of Judson Mills of Greenville, S. C., and general manager of Gerrish Milliken Mill at Pendleton, S. C. He will maintain his office at Judson Mills.

James D. Chandler has been appointed vice-president of Arista Mills Co., Winston-Salem, N. C. He has been secretary of the company since last September. He was formerly superintendent of Spray (N. C.) Cotton Mills.

E. H. Timanus has been elected vice-president in charge of spun fibers of American & Efird Mills, Mount Holly, N. C., at a recent stockholders meeting. He was formerly assistant vice-president. . . . Robert H. Crawford, of the company's sales yarn division, was promoted to assistant vice-president and assistant sales manager. . . . Robert F. Jesson was made assistant vice-president of the textured yarn division. . . . E. R. Abernathy was named assistant secretary-treasurer.

Frank E. Slack, who resigned recently as executive vice-president of the Association of Yarn Distributors, has opened offices in the PSFS Building in Philadelphia, Pa., as a textile-financial consultant. Mr. Slack, who had been president of the Association of Yarn Distributors for 33 years, has been named a special representative for the Textile Banking Co. of New York. Following his resignation from the yarn association, he was elected executive vice-president emeritus by the board of directors.

Wordest Ray Felts of Roanoke Rapids, N. C., has been awarded the $400 Keever Starch Co. Scholastic Award in recognition of his academic achievements at North Carolina State College. He graduated from the college's school of textiles in June. He has accepted a position in production work with Cone Mills Corp., Greensboro, N. C. Mr. Felts, who formerly worked as a loomfixer with the Patterson Mills Co. of Roanoke Rapids, is a member of the State College chapter of Phi Psi, national textile honor society, and the Tompkins Textile Council.

William H. Shields, assistant to the research director, Emery Industries Inc., Cincinnati, Ohio, has announced his retirement. He joined the company's research staff in 1925 upon graduating from the University of Cincinnati. In 1943, he was appointed assistant research director, heading the company's textile and Sanitone research department. Mr. Shields is a member of the American Chemical Society, the American Association of Textile Chemists & Colorists and the American Oil Chemists' Society.

F. T. Hopkins

Frederick T. Hopkins has been appointed sales manager for industrial yarns and fabrics for the textile division of U. S. Rubber Co., New York City. Mr. Hopkins, who was formerly assistant sales manager, succeeds Albert W. Hansen, who has retired. Mr. Hopkins will direct sales of hose and belt ducks, insulating and mechanical yarns, Ustex yarns and a variety of other industrial yarns and fabrics. He has been with the company since 1937.

Sam A. Neaves, head of the standards department, Chatham Mfg. Co. of Elkin, N. C., has been named director of all operations at the Springfield (Tenn.) Mills Co. which has recently been acquired by the company. He will work for the smoothest possible transition in the change of ownership. Mr. Neaves is a graduate of the University of North Carolina.

David H. Abrahams, formerly a chemist with National Aniline Division, Allied Chemical & Dye Corp., has joined the New York City laboratories of Dexter Chemical Corp. He graduated from Lowell (Mass.) Technological Institute with a bachelor of

Brady, Earl

CORN PRODUCTS REFINING CO. has adopted a new corporate symbol representing its entire line of corn products. The new emblem carries the calligraphic "CP" in red within a circular golden yellow frame. Symbolizing a cross section of corn, the circular grouping of perfect corn kernels gives the emblem an eye-stopping design. Shown looking over the symbol are William T. Brady, president of Corn Products, and Harley Earl, head of the industrial firm which created the trademark.

science degree and received his master of science degree in 1955. Previously he had a teaching fellowship in organic chemistry at the institute and a teaching assistantship in chemistry at Massachusetts Institute of Technology.

John C. Cook

John C. Cook has been appointed plant manager of Bigelow-Sanford Carpet Co.'s Georgia Rug Mill at Summerville, Ga. He succeeds Ralph A. Rhodes, who has been elected a vice-president of the company in charge of its Sanford Division which is the administrative and sales organization for the distributor line of Sanford carpets. Mr. Cook has been the assistant for administration and operations at Georgia Rug Mill since 1951 and was active in the expansion program that increased the plant's capacity tenfold. During World War II he served in the Pacific as a Navy fighter pilot and is a commander in the U. S. N. Organized Reserve. Mr. Cook was educated at Washington and Lee University.

Miss Caroline Boyer has been appointed head of product information service of the public relations department at American Viscose Corp. with headquarters at the company's Philadelphia, Pa., office. She has been head of the education branch of the company's textile research department since 1947. In her new position, Miss Boyer will continue to enlarge public relations activities with home economics colleges, textile schools and related fields. She joined American Viscose in 1945 as assistant to the head of the education branch. Miss Boyer received her B. S. degree in home economics from Drexel Institute of Technology and her M. S. degree in textiles at Kansas State College.

The election of Joseph C. Duke as executive vice-president in charge of coated abrasives and adhesives and coatings, and Bert S .Cross as vice-president in charge of graphic products has been announced by the Minnesota Mining & Mfg. Co., St. Paul, Minn. The company also announced the election of Dr. Byron J. Oakes as vice-president of the chemical products group and Cecil C. March as vice-president of the coated abrasives and related products division. Mr. Duke has been with the company for 36 years and has been a vice-president since 1948. Mr. Cross has been with the company since 1926 and was also elected a vice-president in 1948. Dr. Oakes has been general manager of the chemical products group since it was formed in 1955 and has been with the company since 1928. Mr. March has been general manager of the coated abrasives and related products division since 1955 and first became associated with the company in 1933.

OBITUARIES

James Lloyd Braman, 75, retired chairman of the board of governors of F. C. Huyck & Sons, died May 13. He had

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"Coordinated Production"

NEW
ALBANY FELT COMPANY PLANT
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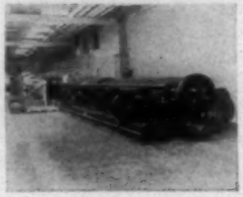

The Albany Felt Company is the world's largest manufacturer of paper maker's felts. Significantly, this company chose new Davis & Furber equipment for every possible phase of its operations.

Among the "coordinated" D & F machines installed, *shown at left,* were D & F 84" wide Model L cards, Model F (5" rings) and Model G (7¼" rings) spinning frames, a Model 60 Warp Spooler, and a 500" Sectional Warp Dressing Reel. The South is justly proud of the St. Stephen plant, the first complete wool paper maker's felt plant in that section.

Other quality-minded woolen mills can benefit by investigating this type of "coordinated production" that resulted from D & F research and development in special requirements and sizes. For, Davis & Furber design and manufacturing facilities are "engineered" to *anticipate* trends in textile production. This permits many improvements in existing equipment that can increase quality and production to meet the demands of competitive markets.

D & F "coordinated production" ties Davis & Furber equipment right into your own production needs. It includes in-the-mill services of trained D & F technicians, D & F design engineers, D & F experienced erectors, along with their survey, study and analysis. In addition, you receive complete advice and availability on supplies, accessories and spare parts. **This is a "Package Plan" that assures satisfaction from one source in all these phases of operation.**

When you want new-plant quality and yield, modernization of existing equipment, or properly specified accessories and supplies, call on Davis & Furber at North Andover or Charlotte.

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MACHINERY MODERNIZATION • ACCESSORIES, SUPPLIES, CARD & NAPPER CLOTHING, GARNET WIRE, TAPES & APRONS
SPARE PARTS • TECHNICAL SERVICE & CONSULTATION

been hospitalized for two weeks after suffering a heart attack. He joined the company shortly after the turn of the century and was named vice-president and treasurer in 1933. Five years later he became chairman of the board. Mr. Braman retired from active duty in 1947 but retained the chairman's post until two years ago.

B. H. P. Draper, Jr., 49, former treasurer and director of the Draper Corp., died May 29 at his home in Naples, Fla. He had been retired since 1952. He joined Draper in 1929, working first in the shop and later as purchasing agent. He was treasurer and a member of the board for ten years prior to his retirement. Mr. Draper graduated from Harvard College in 1931. He is survived by his widow, a son, a daugher and two brothers.

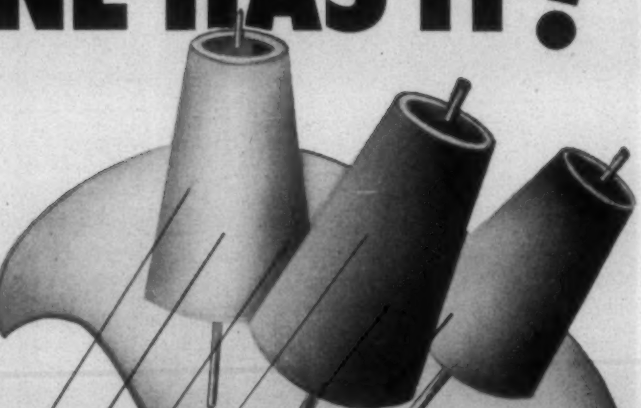
Barnard Murphy, 58, vice-president for administration of Riegel Textile Corp., died May 22. He had long been prominent in the South's textile industry. He had taken a lead in textile education and was a past president of the Cotton Manuafturers Association of Georgia. Mr. Murphy became superintendent of the Trion (Ga.) Co. in 1929 and held several executive positions until 1946 when that company along with Ware Shoals (S. C.) Mfg. Co. was made into Riegel Textile Corp. At the time of the merger he was made vice-president and a director of Riegel. He had served as vice-president for administration since December 1956. He is survived by a son, a brother and five sisters.

Britt Ware Robinson, 72, retired superintendent of Callaway Mills' Millstead (Ga.) Plant died last month. In 1929 he became associated with the New England Southern Mills, La Grange, Ga., which was later purchased by Callaway Mills. He had been associated with the company until his retirement a few years ago. He is survived by his mother, a son and four daughters.

Irving W. Reynolds, 77, vice-president of The Foxboro (Mass.) Co., died June 3 of a heart attack. He joined the firm in 1908 which was the year it was founded. Mr. Reynolds specialized in the production of precision instruments and as factory manager. He is survived by his widow, a son and two grandchildren.

George H. Snow, 74, retired executive of Howard Brothers Mfg. Co., died at his home in June. He was a charter member of the Textile Association of New England. He is survived by his widow and a daughter.

Fred W. Symmes, 77, textile executive and former president of the American Cotton Manufacturers Association, died May 23. He served as a member of the board of the National Cotton Council from its origin in 1940 until his death. He and his associates organized the Nuckasee Mfg. Co. in 1910. It was the first garment factory in South Carolina. He was president and treasurer at the time of his death. In 1929 the common stock of Nuckasee was sold to Union-Buffalo Mills Co., then operating plants at Union, Buffalo and Fairmont, S. C., and Mr. Symmes became a director of the parent company of which he was named president and treasurer in 1932. He held those positions until the company sold to United Merchants & Manufacturers Inc. in 1946. He was elected a director of U. M. & M. in 1948. Mr. Symmes was the principal organizer of Piedmont Plush Mills of Greenville, S. C., in 1925 and served as both president and treasurer until he took over active management of Union-Buffalo Mills. He then relinquished the office of treasurer to Sydney Bruce who became the company's active manager. He and Mr. Bruce directed the 1929 reorganization of Camperdown Co. of Greenville with Mr. Symmes as vice-president and Mr. Bruce as president. Mr. Symmes became treasurer of F. W. Poe Mfg. Co. of Greenville in 1935 and held that position until the mill was sold to Ely & Walker after World War II. He was also a director of Textile Hall Corp. and Chiquola Cotton Mills. He is survived by three sisters and two nieces.



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SOLUTINTS

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MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

New York City—United Merchants & Manufacturers Inc. has installed an I.B.M. 305 Model "A" Ramac (Random Access Method of Accounting and Control). The installation is said to be the first of its type in the textile industry. The machine is used in the preparation of statistical order information, in merchandising control and in forecasting future requirements. The machine holds in its memory 5,000,000 facts and figures relating to the supplies of finished and unfinished goods.

Charlotte, N. C. — The Louise Mill here of the Amerotron Corp. will be closed when stock on hand has been run out. The move is being made because the company finds it advisable in view of the adverse condition of the market. The mill contains some 35,744 spindles and 640 looms and is engaged in the manufacture of combed lawns.

Asheville, N. C. — The Midwest Rug Mills of Amboy, Ill., plans to establish a yarn spinning plant in this city. A building containing about 32,000 square feet of floor space has been purchased for this purpose. The company, which uses about 2.5 million pounds of yarns annually, is expected to make about one million pounds of yarn per year in the new facility. It is reported that the company will spend some $90,000 for the property and alterations and an additional $100,000 for machinery.

Danville, Va.—Dan River Mills will be host for a series of activities held during the week of July 4th in recognition of its diamond anniversary. The week has been designated 75th Anniversary Week and ceremonies will commemorate the milestone year in the company's long life. Climax of the week will be an old fashioned Independence Day celebration for employees and their families with carnival rides for the children, professional stage shows, a fireworks display, dancing to the music of three orchestras and plenty of food and soft drinks. Earlier in the week, the company will invite people in Danville and surrounding areas to visit the mills on two special open house days.

Rock Hill, S. C.—Highland Park Mfg. Co. here is continuing its plant-wide modernization of equipment and machine layout. A basement area has been cleared to create a new weave room. Pneumafil and overhead travelling cleaners are being installed on spinning and roving frames.

Easley, S. C.—Alice Mfg. Co. has announced that it will sell 35 of its village houses here. The houses are offered first to their occupants and then to other employees on first-come, first-serve basis.

Ware Shoals, S. C. — Riegel Textile Corp. has completed arrangements for $12,000,000 of long-term financing. The proceeds of this financing will be used to retire a term bank loan amounting to $4,400,000 and the balance will be applied to the reduction of current bank indebtedness. The financing has been arranged to take the place of the proposed public offering of $12,000,000 of 5½ per cent sinking fund debentures which was withdrawn in January 1957 due to market conditions.

Elkin, N. C.—The Chatham Mfg. Co. of this city has purchased the entire operation of Springfield (Tenn.) Woolen Mills Co. The newly-acquired property has produced brand woolen blankets and apparel fabrics since its founding in 1903. The quality standards, service and merchandising policies will be maintained by the new owners. The Springfield plant employs approximately 300 persons.

Cordova, Ala.—Indian Head Mills Inc. and J. L. Stifel & Sons Inc. have announced that final negotiations are in progress for their merger. Indian Head operates mills here and in Spartanburg, S. C., and Ponce, Puerto Rico. J. L. Stifel operates a cotton mill at Glendale, S. C. Final terms of the merger will be subject to the approval of stockholders of both companies.

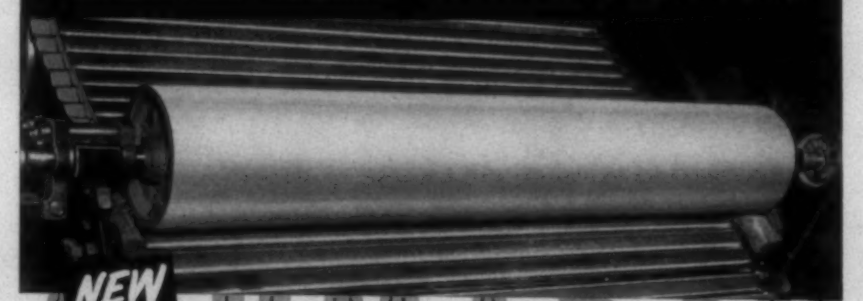
Greenville, S. C.—The J. P. Stevens & Co. Inc. has acquired all the outstanding capital stock of Forstmann Woolen Co. and Julius Forstmann & Co. Inc. The agreement is based on the understanding that the Forstmann Co. will continue its current manufacturing, merchandising and selling operation under the present management. The move is another step by the new owners in adding to the diversification of its present operation.

Durham, N. C.—Erwin Mills Inc. held a brunswick stew dinner for its 5,000 employees in this city on June 1. This concluded a round of such gatherings held by the company at its plants in Erwin, N. C., Cooleemee, N. C., and Stonewall, Miss.

Edgefield, S. C.—Addison Plant of the Kendall Co. has installed Pneumafil central material recovery systems on 82 spinning frames. This installation covers 21,984 spindles.

Calhoun Falls, S. C.—A new carpet wool preparation and yarn making plant being built here by Lockwood Greene Engineers for Bigelow-Sanford Carpet Co. Inc. is nearing completion. The Rocky River Mills will have an independent water supply and effluent disposal system. The building frame is reinforced concrete with long-span joists supporting precast concrete roof slabs. Load bearing walls are being built of 12-inch Jumbo brick. The office and manufacturing departments are air conditioned. Operations in the plant are scheduled to begin Aug. 1.

TROUBLE-FREE GRINDING . . . ON COTTON CARDS . . . WITH



NEW ALUMAROY DRUM GRINDERS

B. S. Roy's latest development . . . an aluminum alloy drum grinder . . . weighs only half that of steel or cast iron models.

This lightweight grinding roll eliminates springing of the top flats caused by the heavier drums and assures even, perfect grinding over the entire surface of each working flat.

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April Wool Consumption Down 6%

The weekly average rate of fiber consumption on the woolen and worsted systems in April was six per cent below the March rate and 13 per cent below that of April 1956. The weekly raw wool consumption during April was 7,902 thousand pounds (scoured basis) or seven per cent below the March level and 14 per cent below that of April 1956. The rate of consumption of carpet class wool decreased nine per cent compared with the previous month and was five per cent below the April 1956 level. Consumption of apparel class wool was six per cent below the March level and 19 per cent below that of April of last year.

Presidential Cotton Task Group Reports

Cotton's greatest opportunity for increased consumption depends on quality improvement and cost reduction. These factors can come about only through: (1) a greatly expanded and more efficient research program; and (2) an improved technical information service to increase use of research findings. These are the principal conclusions in the report of the Cotton Task Group of the Presidential Commission on increased industrial utilization of agricultural commodities.

"In the opinion of the Task Group, no factor has been as important as the lack of an adequate research program in the gradual chipping away by competitors of certain end-use markets for cotton," said M. Earl Heard, chairman of the group, and vice-president and director of research at the West Point Mfg. Co., Shawmut, Ala. "By the same token, no single factor is as important as an increased research program in the further development of expanded markets for cotton," he added.

The Task Group's analysis of ways and means for increasing cotton consumption entailed a careful study of the fiber's relationship to the national economy. The size and nature of present markets and consumption trends as well as potential for expansion were considered. It was pointed out that the equivalent of more than 13 million bales of other materials are now consumed annually in end-uses supplied partially by cotton. A large portion of this 13-million-bale market is potential for expanding cotton consumption. There is a further possibility of taking a larger share of the consumer's dollar in competition with such other industries as producers of electric appliances and automobiles. The report noted the tremendous potential for expansion by increasing per capita consumption especially in foreign countries.

Other recommendations of the report are: (1) A really significant expansion in funds available for research, including research done under contract to domestic research agencies and to foreign agencies. (2) Appointment of a commission to study and make recommendations concerning (a) the organization of a federal cotton research and development program; (b) methods for attracting the best qualified research brains to cotton problems; (c) ways of providing maximum flexibility in operation of the research program, including but not limited to the use of grants, fellowships, development contracts and assistance in commercializing new or improved products. (3) Appointment of a special assistant for cotton affairs within the Department of Agriculture to serve as the central contact for the entire cotton industry. (4) Development of more adequate methods for evaluating the quality of cotton, the incorporation of these methods into the official quality classifications system of the department as they are proved practical and the maintenance of adequate supplies of all quality descriptions in stocks to assure maximum consumption.

Other members of the Task Group were: Walter Regnery, vice-president of Joanna (S. C.) Cotton Mills Co.; Otto Goedecke, president of Otto Goedecke Co., cotton merchants, Hallettsville, Tex.; Dr. C. H. Fisher, director of the Southern Utilization Research and Development Division of the U.S.D.A., New Orleans, La.; J. Russell Kennedy, general manager of the California Cotton Co-Operative Association, Bakersfield; and Wm. Rhea Blake, executive vice-president of the National Cotton Council of America, Memphis, Tenn.

Synthetic And Cotton Use Off

Average consumption of cotton per working day in April amounted to 32,319 bales against 36,128 bales a year earlier and 34,531 bales per day in March, according to the Census Bureau. However, due to a difference in the number of working days, the total consumption of cotton in April rose to 807,979 bales from 690,627 bales in March and 722,551 bales in April of 1956.

Daily average consumption of synthetic staple by mills with cotton system spindles dropped to 1,607,000 pounds in April from 1,731,000 pounds during that month last year and 1,712,000 pounds in March 1957. Total April consumption climbed to 40,162,000 pounds over 34,619,000 pounds in April 1956 and 34,236,000 pounds for March of this year.

On May 4 there were 21,539,000 cotton system spindles in place of which 18,365,000 were consuming cotton and 1,564,000 were consuming other than cotton. March exports of cotton totaled 786,740 bales compared with 294,066 bales in March 1956. For the eight months through March 1957 exports totaled 5,387,494 bales against 1,135,836 exported in that period a year earlier. Imports of cotton in March rose to 9,851 bales over the March 1956 imports of 8,618 bales. For the eight months through March 1957, imports totaled 69,940 bales against 119,022 bales for that period last year.

A.A.T.C.C. Awards Olney Medal

P. J. Wood

P. J. Wood, technical director of Royce Chemical Co. and past president of the American Association of Textile Chemists & Colorists, has been named the 14th winner of that association's Olney Medal, highest A.A.T.C.C. award, given each year for "outstanding achievement in the field of textile chemistry." Mr. Wood has had a long and distinguished career in business, as a professional man, and in various posts of service in community efforts. He is a charter member of A.A.T.C.C., and served as president in 1931 and 1932. By virtue of that service he is a permanent member of the group's governing council. He is presently chairman of the A.A.T.C.C. analytical methods committee and a member of several other important committees, including appropriation, archives and the technical committee on research.

The medal itself will be formally presented to Mr. Wood at the annual Olney Award Luncheon, to be held during the A.A.T.C.C. convention, Nov. 14, 15 and 16 at the Statler Hotel, Boston Mass. A summary of the medalist's career, accomplishments and personal background will be made at the 1957 Olney Award Luncheon by a close professional friend of the winner, Dr. Milton Harris, director of research for the Gillette Co. and until recently president of Harris Research Laboratories, Washington, D. C.

Born June 21, 1880, in Leeds, England, Mr. Wood was educated in English schools, receiving a diploma in chemistry and dyeing in 1898 from the University of Leeds. Following graduation, he served three years as an apprentice with William Grandage & Co., Bradford, England, and then returned to the University of Leeds as lecturer in the department of tinctorial chemistry and dyeing, for a period of two years. He then came to the U. S., and from 1903-1906 was chief chemist at American Silk Dyeing and Finishing Co., Hawthorne, N. J., following which he became superintendent of Peerless Finishing Co., Nyack, N. Y., until 1908. From 1908 until 1934, he was vice-president and manager of Oriental Silk Printing Co., Haledon, N. J. After two years consulting work, he joined Royce Chemical Co., Carlton Hill, N. J., as technical director, which is his present position.

In addition to his A.A.T.C.C. past presidency and charter membership, Mr. Wood is also a life member of the Chemists Club, New York; Fellow of the American Institute of Chemists; Fellow of the Textile Institute (England); and Fellow of the American Association for the Advancement of Science. He has been secretary of the Passaic Valley Subsection of the American Chemical Society, and secretary of the Colorists Club for 15 years. Mr. Wood has published 30 technical papers including a number of translations from French, German and Italian. He is married to the former Margaret May Davidson.

The Olney Medal is a heavy cast piece bearing a likeness of Dr. Louis Atwell Olney, founder of the A.A.T.C.C., on the front and a simple inscription on the reverse side. The award is presented by an A.A.T.C.C. committee to any citizen of the U. S. as recognition for "outstanding achievement in the field of textile chemistry, including the development of chemical agents or chemical processes used in the manufacture of textiles, or methods for their evaluation."

A.C.M.I. To Study Economic Policy

The new economic policy committee of the American Cotton Manufacturers Institute will be composed of 15 leading executives, according to an announcement by L. G. Hardman Jr., president of Harmony Grove Mills of Commerce, Ga., A.C.M.I. president. In his announcement he said that F. E. Grier, president of Abney Mills of Greenwood, S. C., and past president of A.C.M.I., would be the chairman of the committee. "Expansion of A.C.M.I.'s program of activities in the fields of economic analysis and statistical reporting is particularly timely because of the consolidation of the National Federation of Textiles with A.C.M.I." said Mr. Hardman.

Other members of the committee, which held its first meeting in New York City on June 12, are: Malcolm G. Chase Jr., president and treasurer, Berkshire Hathaway, Providence, R. I.; William J. Erwin, president, Dan River Mills, Danville, Va.; Dave Hall, secretary and treasurer, Stowe Thread Co., Belmont, N. C.; Charles C. Hertwig, chairman, Bibb Mfg. Co., Macon, Ga.; W. J. Holman Jr.,

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Electrical Engineers Aid Automation

Direct current adjustable speed drives are contributing to automation in the textile industry, the Summer general meeting in Montreal, Que., of the American Institute of Electrical Engineers was told. At the same time, the industry was warned that it must seek new and improved processes to keep in step with the times because of rising costs of basic raw material and labor. "There has been a marked trend in recent years towards a greater use of d.c. adjustable speed drives in the textile industry," G. Forsberg, Canadian General Electric Co., of Peterborough, Ont., said. "If a qualified observer were asked to give a reason for this trend he might reply the improved performance of d.c. adjustable speed drives has permitted higher operating speeds and finer quality control. In addition, this type of drive offers the greatest scope for continuous processing.

"Such a statement, while complete in itself, carries an underlying inference of great significance. Continuous processing, as distinguished from batch methods, is the first step towards automatic production and is therefore irrevocably linked to the magic word "automation." Since many authorities seem to agree that automatic production is our only salvation if the present rate of economic growth is to continue, then it is only reasonable that we consciously strive toward this goal. In many cases the d.c. drive has proven to be the most satisfactory means to this end," he said.

Textile electrical engineers are in the most favorable position to aid the industry in this period of seeking better manufacturing methods to offset rising costs, he said. "By being aware of the requirements for more automatic production and by applying the results of modern technology to the design of their drive systems, they can make a great contribution to the industry. The electrical manufacturing industry stands ready to provide this knowledge and experience of its industry specialists to aid them in this effort," said Mr. Forsberg.

Cotton Study Initiated

The Textile Research Institute, Princeton, N. J., has recently been awarded a contract with the agricultural research service of the U. S. Department of Agriculture to conduct research on cotton fiber properties. The project, entitled "Detailed Study of Cotton Fiber Extensibility and Its Practical Significance," involves an investigation of the fundamental principles of cotton fiber extensibility, its relation to the molecular structure of the cotton fiber, and its translation to the properties of more complex textile structures such as yarns.

Textron Fellowships Awarded

Textron Foundation Fellowships were awarded at ceremonies at the plant at Williamston, S. C., to Charles Davenport, an employee of the Honea Path, S. C., Amerotron plant; Tommy Queen of the Peerless plant at Belton, S. C.; Billy Joe Gilstrap, whose parents are both employees of the Peerless plant; and Oren F. Hunter of the Barnwell, S. C. plant. The Fellowship recipients will prepare for professional careers in the textile industry.

Ask Limit On Wool Cloth Imports

New England's 12 Senators have recommended that the office of Defense Mobilization take "appropriate steps" to limit the disruptive effect imports have had on the domestic wool textile industry. Sen. Leverett Saltonstall (R., Mass.) serving as spokesman for the group told an O.D.M. hearing that "it is not our understanding" that the industry considers imports the sole cause of its contraction. However, he added that imports have placed an important disruptive element "on top of problems of supply and demand which the industry has been and is currently facing."

At the same time, Sen. J. Strom Thurmond (D., S. C.) urged that "every consideration" be given to the problem faced by the U. S. industry and to its defense essentiality. He noted that he was aware that President Eisenhower has invoked the Geneva Reservation on wool fabric imports for 1957. "However, I feel that the effects of foreign imports on the American woolen industry should be thoroughly reviewed," he said.

N.L.R.B. Elections Held

The employees of Linen Thread Co., Blue Mountain, Ala., rejected the United Textile Workers Union in an election held on June 5. The result of the voting is reported to have been 453 to 309, with seven votes challenged and one voided.

* * * *

The employees of the U. S. Rubber Co. at Shelbyville, Tenn., have rejected the Textile Workers Union of America in elections held June 7. This is the second time in two years the T.W.U.A. has been rejected by the workers. The result of the voting is reported to have been 386 to 312. Three ballots were challenged and five were voided.

* * * *

The employees of the Osceola (Ark.) Finishing Co. have voted against representation by the Textile Workers Union of America in a recent election. The company is a subsidiary of Crompton-Shennandoah Co. of Waynesboro, Va.

* * * *

The employees of the Fieldcrest Towel Mill of Fieldale, Va., rejected the Textile Workers Union of America as their bargaining agent in an election conducted on June 6. The vote was 636 to 437, with 12 ballots challenged and nine others voided.

Court Reverses N.L.R.B. Findings

The U. S. Court of Appeals at New Orleans, La., denied enforcement of a National Labor Relations Board order against the West Point (Ga.) Mfg. Co. in a unanimous decision on June 10. The N.L.R.B. sought to require the company to reinstate six employees who were discharged for alleged union activities in 1955. The court found these

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employees were discharged for violation of instructions or derelictions of their duty at a time when the company was engaged in an intensive drive to improve the quality of its product. It was pointed out that credible evidence did not support the board's findings that these people were discriminatorily discharged.

Textile Developments From Italy

A new textile printing method and a new synthetic yarn were among the significant textile displays introduced at the recent U. S. World Trade Fair at The Coliseum in New York City.

Olivetti, best known as an Italian manfacturer of various types of office machinery, demonstrated the use of a new electronic textile printer. Called the Olivetti Photoelectric Pantograph, the instrument electronically engraves printing cylinders for printing designs on textiles. According to an Olivetti representative, the machine eliminates much of the usual preparatory work and reduces the manpower and skill required for this type of process. It also decreases the time required for the cutting operation from one-half to one-seventh depending on the design.

In principal, the machine operates directly from a drawing or photograph and engraves it automatically on the cylinder. During the operation, an electronic head picks up the signal and a diamond head engraves it on a copper drum. The rollers are then used by printers or finishers to print the fabric. The cylinders may be engraved either in hollow or relief for the preparation of rollers used for printing textiles.

* * * *

Snia Viscosa of Italy, one of Europe's largest producers of synthetic yarns and a leading supplier of viscose before World War II, inaugurated its bid for a return to the American market at the World Trade Fair. The company introduced a new synthetic polyamide fiber called Rilsan that was said to be the first synthetic fiber of vegetable orgin. It is a castor oil derivative.

Rilsan, which has been produced commercially in Europe for several years is popular because of its allergy-proof quality, due to its vegetable oil base. Other characteristics of the fiber mentioned by a spokesman for the group included the fiber's ability to filter perspiration away from the body, its crease resistance and its resistance to acids and alkalies.

Productionwise, it was said to have ten per cent greater covering power than other synthetic polyamides and gives ten per cent more yardage on the same amount of poundage. Pricewise it is expected that Rilsan will be competitive with American nylon prices. Rilsan staple has a handle and appearance very similar to wool, while the Rilsan continuous filament is similar to silk. Among the many uses anticipated for the fiber there are included socks and stockings, raincoats, fabrics for ladies' garments, knit outerwear and industrial fabrics. Rilsan can also be blended with wool to increase the strength and resistance to abrasion of wool items.

N. C. Textile School Issues Invitation

The North Carolina Vocational Textile School at Belmont, N. C., has issued an invitation to all mill superintendents and overseers to pay a personal visit to the school for the purpose of learning first hand of the courses of study available. In issuing the invitation, Chris E. Folk, principal of the school, pointed out that courses are available in yarn manufacturing, weaving, designing, knitting and mill maintenance. Average enrollment at the school is about 275 to 300 students, a large number of which are employed in nearby mills and who attend classes in off-shift hours. Two sessions are held in each course daily—the morning shift beginning at 8:20 a.m. and running to 1:00 p.m.; the evening shift from 3:00 p.m. to 6:30 p.m. Supervisory personnel interested in touring the school can make necessary arrangements by a telephone call or letter to Mr. Folk.

A.A.T.C.C. Honors Chapin And Sampson

Dr. Harold Canning Chapin and Albert Edward Sampson, recently retired national secretary and treasurer, respectively, of the American Association of Textile Chemists & Colorists, have been unanimously elected honorary members of the association by the 57 members of the A.A.T.C.C.'s governing council. Certificates attesting to their election to honorary membership in A.A.T.C.C. will be presented to Dr. Chapin and Mr. Sampson at the association's 1957 convention to be held Nov. 14-16 at the Hotel Statler, Boston, Mass.

Dr. H. C. Chapin

A. E. Sampson

Only five other members of the association have been raised to the level of honorary membership: William K. Robbins, Walter E. Hadley and Hugh Christison, all deceased; William R. Moorhouse, treasurer emeritus of the association; and William H. Cady, past president and editor of the A.A.T.C.C. technical manual and year book.

Dr. Chapin retired July 31, 1956, from his position as A.A.T.C.C. national secretary, a post he had held since 1933. He was born Sept. 20, 1883, in Gill, Mass. He was educated at Cambridge (Mass.) Latin School and Harvard University, receiving his B.A. in 1904 and a PhD. in 1910. Dr. Chapin was an instructor at Rensselaer Polytechnic Institute from 1909-1913; chemist and executive at National Carbon Co., 1913 to 1918, associate professor at Lafayette College 1918 to 1920, and assistant professor and consultant, Lowell Textile Institute, 1920 to 1947.

He is a member of the American Chemical Society, and the Harvard Club of Lowell, and is listed in *Chemical Who's Who.* In addition to his work as national secretary of A.A.T.C.C., he was formerly secretary of the New England Section, and held many important committee posts in the association. Dr. Chapin married the former Pauline Elizabeth Dufree in September 1917, and they have four children.

Mr. Sampson, resident manager of the Boston office of the National Aniline Division of Allied Chemical & Dye Corp., is a charter member of the A.A.T.C.C., having joined the organization at its founding in 1921. He served A.A.T.C.C. in many capacities as a committee member and chairman and in advisory financial posts during the years

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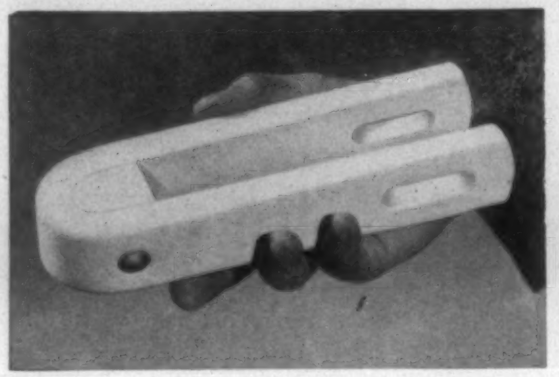

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he was a member of A.A.T.C.C. before becoming, in 1950, assistant national treasurer.

In 1954, he succeeded William R. Moorhouse, now treasurer emeritus, as national treasurer of the association, and held that post until his retirement from office at the end of 1956. Mr. Sampson was born May 24, 1892, in Gorham, Me., and was educated in New England, taking his B.S. from the Massachusetts Institute of Technology in 1915. He is married to the former Anna Lee. He is a member of Rotary International, and the Newcomen Society, in addition to his A.A.T.C.C. affiliation.

Mr. Sampson, as chairman of the A.A.T.C.C.'s color index marketing committee, has been instrumental in coordinating this country's role in the joint production (with the British Society of Dyers & Colourists) of the monumental four-volume *Colour Index,* which is now being distributed after several years work.

Cottonseed Association Hears Grier

F. E. Grier of Greenwood, S. C., president of Abney Mills and chairman of the board of Erwin Mills, speaking at the recent annual joint convention of the North Carolina-South Carolina Cottonseed Crushers Associations, said that the cotton industry is "mighty close to being choked to death by too much benevolent government." Legislated attempts to cure cotton's troubles have brought only new problems and "burdensome surplus that has played havoc with almost every section of our industry," he said.

He added that a respected leader of the cotton industry said recently that "the outlook now is for cotton to continue its perilous downhill course unless some action is taken to make it competitive again. His theory was, and I think he was right, that cotton had priced itself artificially right out of the market, giving impetus to a boom in man-made fibers, plastics and other cotton substitutes.

"The question, logically, is what should we do about it? I submit to you that the better queston is: who should take the steps necessary to correct this situation? And I would like to answer my own question by saying it should be the industry itself that should take the action necessary to make cotton competitive and healthy again."

Mr. Grier warned that "we are coming close to having all segments of our industry drawn into a position where we are entirely dependent on government." He said the decline of cotton consumption "is the classic result of the continuance of measures undertaken to cure an emergency situation after the emergency has passed." He quoted Secretary of Agriculture Benson as saying that the export program undertaken to reduce the government's stock of surplus cotton has been operated at a net loss of $535 million in the last 15 months.

"Speaking as an individual mill man," Mr. Grier declared, "I concur with the secretary when he says, 'The American people will gladly underwrite costs of great magnitude in order to solve a problem, but I do not think they will do so merely to carry the problem indefinitely.'

"We now have the ridiculous situation," Mr. Grier said, "of having a two-price system for cotton. There is one price for overseas buyers and one for domestic purchasers. The domestic buyer, of course, pays the higher price, and in addition, if you will pardon the sarcasm, he has the opportunity of paying taxes to make up the losses incurred by the sale of price-supported cotton on the open overseas market. The mill man also can watch this cotton, sold cheaply overseas, come back in goods that are priced below his and consequently, he meets them again in trying to hold on to a fast dwindling export market for his goods."

Cotton, he said, will get nowhere so long as its price is artificial. "The law of supply and demand, like truth crushed to earth, will rise again. Price has a definite function in our economy. When the price at a given time is too high, buyers will find substitutes. And that is exactly what has happened and it will continue to happen at an accelerated pace unless cotton can somehow be made to stand on its own feet in a free market."

Mr. Grier said that research programs are needed at every level of the cotton industry to improve end products, methods of manufacture and to discover better means of promoting and advertising cotton products. "I think," Mr. Grier concluded, "that cotton and textiles have a brilliant future togethter. I think every last segment of this industry can prosper and I think it will prosper as soon as we conclude that we are the only ones who can logically solve our own problems and then set about solving them in an aggressive manner."

Preheater Cuts Costs And Smoke

Fuel savings of up to 25 per cent and a marked reduction in smoke and soot can be obtained from the Boston Air Preheater, recently introduced by The Preheater Corp. of America, New York City. This unit, which is usually installed in the fire door of the boiler, supplies preheated secondary air over the fire bed or burners for maximum combustion of the fuel.

The device consists of two basic sections which have an adjustable air intake valve that extends outside of the fire door and a preheating chamber made from a special heat-absorbing alloy mounted on the inside of the door. The air is drawn through the intake by the normal boiler updraft, circulates through a labyrinth of hot surfaces inside the preheating chamber. It is delivered evenly over the fire bed or burners at a temperature of over 400° F. The preheating chamber is heated by radiation that would normally be lost so it consumes none of the fuel energy usable for operating the boiler.

The preheater is designed for use with low or high-pressure, oil, coal or coke-fired boilers of the induced-draft, forced-draft or steam-blast type. Different models are available for all types of boilers.

In normal boiler operation, cold primary air is usually admitted through the primary draft or introduced through blowers. However, the cold air has two negative effects that prevent it from effecting maximum fuel combustion: (1) its temperature is too low to cause effective combustion of the unburned gases and volatile matter and (2) it cools the flame and the heat transfer surfaces. As a result, extra fuel is required to heat the air and the unburned hydrocarbons coming into contact with the cooled boiler walls form soot. The preheater, on the other hand, introduces secondary air at temperatures high enough to promote maximum combustion of the unburned carbon monoxide and the heavier hydrocarbon fractions that linger at the outer edges of the flame and normally settle out as soot or smoke. Introduction of the heated secondary air makes it possible to cut down the intake of fuel-wasting cold primary air. The increased turbulence created by the incoming heated

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She couldn't go to the manufacturer; the salesman's "company" had substituted their own trademark—the actual maker of the machine was unknown.

So our housewife was stymied. Oh, she eventually found a new motor. But the trouble she had! And she learned, the hard way, that she would have saved by buying from well known firms—known for their reliability.

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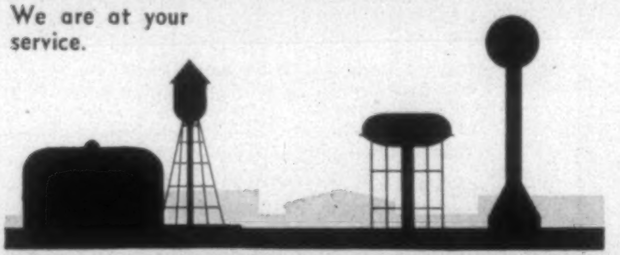

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Georgia Tech Q.B. Gets C.M.A.G. Medal

Wade T. Mitchell, star quarterback on Georgia Tech football teams of the past four seasons and 1956 co-captain, was awarded the Cotton Manufacturers Association of Georgia's Medal in Honors Day exercises at the Georgia Institute of Technology. The medal is given annually to an outstanding graduate of the institute's A. French School of Textile Engineering. The association established the award in 1927.

In presenting the medal, George H. Hightower, vice-president of Thomaston (Ga.) Mills, and president of the C.M.A.G. declared that the association sought to honor "the man in the graduating class who has shown the most marked aptitude for the textile subjects during his course and who has the most likelihood to succeed in textile work."

Mr. Mitchell is the son of Walter M. Mitchell, a 1923 Tech graduate who is vice-president of the Draper Corp.

Iselin-Jefferson To Occupy New Quarters

The Iselin-Jefferson Co. Inc., one of the country's largest textile selling agents, has leased two full floors comprising 55,000 square feet of space at 111 West Fortieth Street, New York City.

Announcement of the long-term lease, negotiated by the Durand Taylor Co. as renting agent for the new 34-story air conditioned office building, was made by Floyd W. Jefferson, co-chairman of Iselin-Jefferson, and Edmund F. Wagner, president of the General Realty & Utilities Corp., builder of the new textile building rising at the northwest corner of Avenue of the Americas and Fortieth Street.

Iselin-Jefferson, a wholly-owned subsidiary of Dan River Mills, is now located at 90 Worth Street, 325 Broadway and 327 Broadway, three adjoining five-story buildings which it has owned and occupied since 1929. The buildings, known as the "gateway to Worth Street," were remodeled at the time of purchase and later air conditioned. Iselin-Jefferson, which has had its main office in the Worth Street area since 1927, will consolidate its operations on the sixth and seventh floors at 111 West Fortieth Street, Mr. Jefferson said.

Increased Funds Voted At Wool meeting

Increases in expenditures for world-wide research and intensification of promotional activities were among decisions reached at the annual meeting of the executive group of the International Wool Publicity and Research Fund held recently in London, England. The executive group also agreed on an extension of joint promotion and publicity programs with the various segments of the wool textile industry, and expressed appreciation for the confidence indicated by the industry's increasing support.

T. G. Carter, chairman of the Australian Wool Bureau, was re-elected chairman of the group. H. K. P. Wood, Australian member of the International Wool Secretariat, was elected chairman of the I.W.S. succeeding L. F. Hartley, who is returning to South Africa following his appointment as manager of the South African Wool Board.

Glass Fiber Products Embrace Many Fields

Members of the engineering and industrial design professions visiting the Design Engineering Show in the New York Coliseum last month learned how glass fiber textile products are making possible new and better products in all fields of manufacturing. According to Don W. Lyon, manager of textile sales for L.O.F. Glass Fibers Co. of Toledo, Ohio, Garan woven roving is an important new development which is helping speed up production and reduce costs in the reinforced-plastics field. Less expensive than cloth on a weight basis, Garan woven roving is produced from parallel glass fibers, which are coated with the first silane-type size, says Mr. Lyon. Laminates can be made stronger, more quickly, because Garan woven roving has greater bulk that builds up to the desired thicknesses two to three times faster.

New plastic products incorporating the new glass fiber reinforcement include tooling fixtures by Quality Plastics and Engineering Co.; a 27-foot cabin cruiser produced by Crystaliner Corp.; a 29-inch tank liner by Modular Plastic Co. and many other items formerly made by slower and more costly processes.

Phi Psi Convention Held

The 54th annual convention of Phi Psi, national textile fraternity, was held in April at the New Bedford Hotel, New Bedford, Mass. The new president of the country's largest national professional textile fraternity is George F. Long of Harchem Division, Wallace and Tiernan Inc. He succeds Willard A. Colby of Emery Industries Inc. who has been named editor of the *Phi Psi Quarterly*. Other officers are: Roger J. Gentilhomme, Cluett-Peabody Co. Inc., vice-president; Benjamin S. Bellemere, Bellemere Chemicals Co., secretary; and Mortimer T. Farley, Taylor-Symonds Co., treasurer.

Various committees and offices have been filled, as follows: Advisory Committee, Willard Colby Jr., chairman; Director of Public Relations, James H. Kennedy, Bruce Payne & Associates Inc.; Grand Senior Warden, Edmund Dupre, N.B.I.T.T.; Deputy Grand Presidents: Boston—Jack Stewart, Monsanto Chemical Co.; New York— Fred Eckstrand, Borne Chemical Co.; Philadelphia—William Moran; Providence and Fall River—Brenden Sullivan; Chicago—Arthur T. Brainerd, Ciba; Greenville — Jasper Jake Ivey, Ivey Chemical Co.; Charlotte—Don Hamilton, Textile Machinery Co.; Albany — Theodore T. Thomas, Thomas Insurance Agency; Chattahoochee Valley—Walter Meadows, West Point Mfg. Co.; Atlanta—Joseph Oliver, Stodghill Chemical Co.; and Charlottesville—James E. Dougherty, Institute of Textile Technology.

Honorary memberships in Phi Psi were awarded to Charles F. Broughton and John J. O'Brien in recognition of their loyalty and contributions to the industry. Mr. Broughton, former president and board chairman of Wamsutta Mills, New Bedford, Mass., started his textile career in 1895 as assistant treasurer and was responsible for introduction of Casablancas long-draft spinning in the U. S. at Wamsutta in 1926, in conjunction with Victor Monaghan Co. of Greenville, S. C. Former chairman of the New Bedford Cotton Manufacturers Association, Mr. Broughton was also a founder and vice-president of the Cotton Textile Institute and director and vice-president of the National Association of Cotton Manufacturers. He has also held

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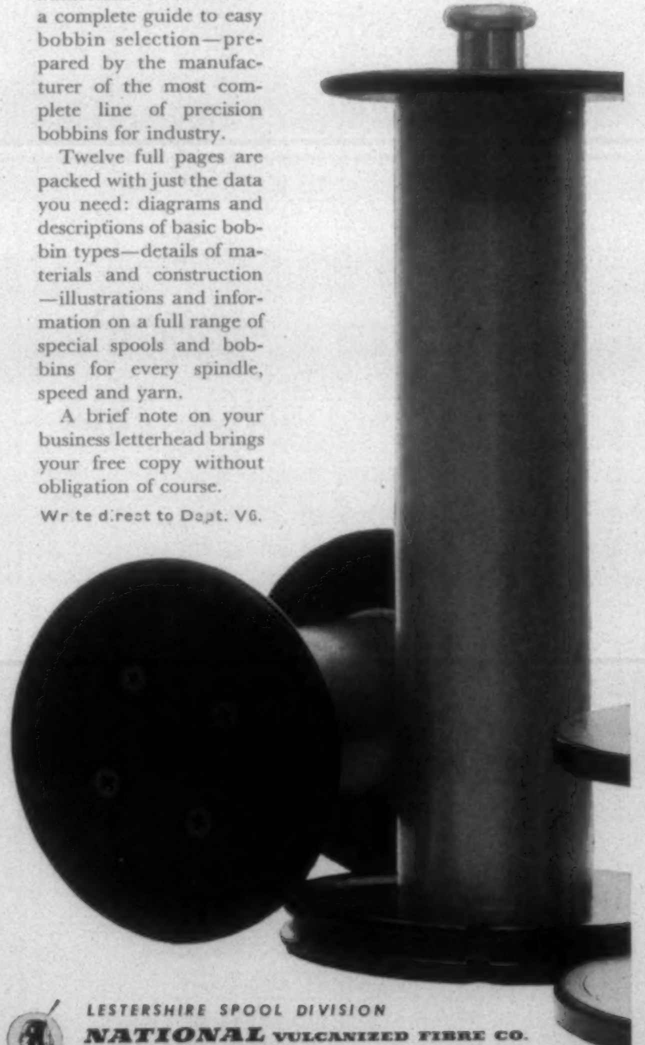

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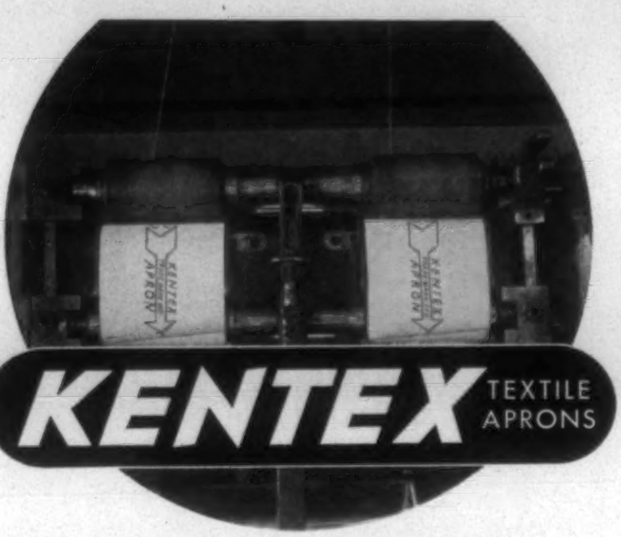

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numerous civic positions of importance and is currently director and trustee of several banks, hospitals, and charitable organizations. He was named 1957 "Man of the Year" by the New Bedford B'nai B'rith Lodge.

Mr. O'Brien, New York sales manager of Danielson Finishing Division of Poudrell Alexander Co., has been an outstanding textile man for the greater part of his life, giving much encouragement to textile students. He served with distinction in the U. S. Air Corps during the Second World War and retired as a Major after seeing action in North Africa, Italy and Europe. He is a past Exalted Ruler of the Putnam branch of the B.P.O.E.

Erwin Holding 'Greenbacks For Safety' Contest

The North Carolina plants of Erwin Mills Inc. are engaging in a safety contest called "Greenbacks For Safety" during the months of June, July and August (13 weeks), according to Carl W. Littlejohn Jr., director of employee insurance and safety for Erwin Mills.

Mr. Littlejohn said that each week the individual employee works without an accident necessitating treatment by the doctor or loss of time from work, his or her supervisor will award the employee with a "Safety Dollar." The employee will then write his or her name on the back of the "Safety Dollar" and drop it in a "Contest Box" in his or her department. Each "Safety Dollar" won (a possible 13) by the individual employee will represent one chance on one of a host of merchandise prizes.

Transforming Cotton With Radioactive Cobalt

Radioactive cobalt (Cobalt 60) will soon be used by scientists of the U. S. Department of Agriculture to speed up their investigations into new uses for cotton and other crops. Cotton is the first commodity scheduled for radiation study. In the past few years, agricultural researchers have made much progress toward increasing the demand for cotton through physical and chemical modification of cotton cellulose. The scientists believe that Cobalt 60 will now provide them with a faster and more accurate means of determining how various modifications affect the chemical reactivity and physical properties of cotton. It will also be used to measure the absorption and adhesion of cotton dyes, and to obtain other information about the behavior of the cotton fiber under varying conditions.

Japan Under Export Quota In April

April exports of cotton textiles to the U. S. from Japan increased slightly from March but still were well below April 1956 and quota levels, according to figures released by the Japanese Finance Ministry. The month's total was 6,112,000 square yards of which almost half was gingham. Greige sheeting was the only other substantial item. April 1956 saw Japan export 9,132,000 square yards of cottons to the U. S.

Total Japanese production of cotton fabrics in April jumped seven per cent over March to reach a new postwar high of 327,608,000 square yards. This compares with an average of 290 million square yards per month in 1956 and 300,201,000 square yards in April 1956. Production gains come while the industry and government are worrying about mounting inventories and falling prices. Curtailment talk is again current.

Progress Report On Improved Bale Covers

It seems only a matter of time until the cotton industry will have the opportunity to choose one or more bale covers capable of providing good protection for lint cotton. This is one of the conclusions of a progress report by the National Cotton Council on the industry's experimental bale cover program. The program was initiated as a result of action taken by delegates to the council's 1952 annual meeting and has been under the general guidance of a packaging subcommittee of the organization's Cotton Quality Committee.

In summarizing the current cotton packaging situation, the report also states: (1) Development and adoption of improved bale covering materials will not, in itself, solve the packaging problem. (2) The industry will face the important decisions on sampling practices, net-weight trading and moisture transfer before major packaging improvements are made.

In describing the need for improvement, the report says the U. S. bale has become notorious for its bedraggled appearance and the amount of quality damage it suffers when unprotected lint comes in contact with tar, grease and other contaminates. Custom, cost and complacency about cotton's competition are cited as reasons. Custom is almost always hard to change, and with the U. S. bale, the task is especially difficult because a change would involve almost everyone in the industry. There also has been a natural tendency to keep packaging costs as low as possible.

In the past, American cotton has been able to feel complacent about competition. But, according to the report, those days are gone forever. Here and abroad synthetic fibers are vying with cotton. Spinners are figuring which fibers offer the best combination of quality and price. And quite often, one of the factors against U. S. cotton in the export market has been the generally superior packaging and bale protection of foreign-grown cotton.

In its search for a new cover, the subcommittee felt any new material should: (1) cover the bale completely; (2) provide access for sampling; (3) be well adapted to machinery currently in use; and (4) be reasonable in cost in relation to the quality losses it would prevent. No effort has been made to eliminate jute as a material.

Of the many different materials tested on a small scale in 1953-54, four were considered promising. In 1955, some 6,000 bales were test-wrapped with plastic films, burlap laminates, paper and nonwoven fabrics. Burlap laminates and creped paper then underwent large-scale tests involving 10,000 bales in 1956. The tests indicated X-crepe paper is not satisfactory under present conditions, but that the burlap laminate, while marginal in strength, is the most promising of the materials tried to date in field tests. Plans call for covering around 10,000 bales with a modified version—12 instead of ten-ounce burlap—of the burlap laminate in 1957. The film will be lighter—¾ to 1 mil—and will have perforations of varied sizes and spaced at varied intervals.

Knitted paper, tried on a small scale in 1956, is expected to go through relatively large-scale tests. If it stands up well, this material might provide a reasonable compromise between the need for complete bale coverage and for a free-breathing bale. But no matter what type or types of covers may be adopted, certain questions must be resolved, according to the report.

Question No. 1: Can the industry expect any new cover

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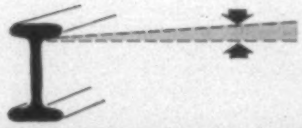

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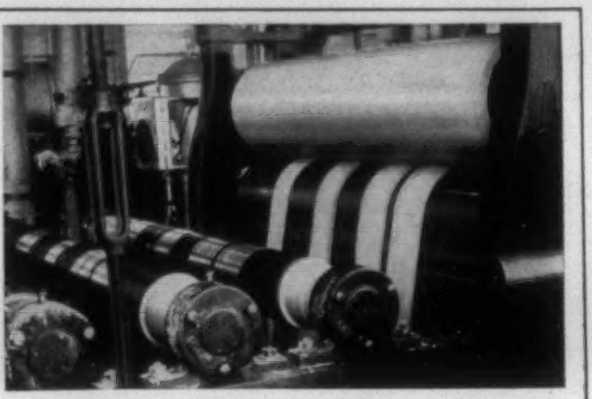

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to do a satisfactory job of bale protection if it is repeatedly slashed for sampling? While many efforts have been made, no satisfactory solution of this problem has been found to date. The report states, "It may be that we cannot find a satisfactory solution short of changing some of our traditional sampling practices."

Question No. 2: Would the industry facilitate major packaging improvements in the years just ahead—and continuing improvements on into the future—by changing from gross-weight to net-weight trading? Since almost all of the covers tested have been lighter than traditional bagging, the industry faces the problem of how this would be reflected in the marketing system. With a lighter new covering material, the problem might not be too difficult; tare allowance could be adjusted downward and price-per-pound upward. "But the problem would get very complicated if we adopted two or more covers which themselves differed in weight," the report states, and points out this is entirely possible. Under net-weight trading, there would be no such problem; bagging and ties would not be included in bale weight. By adopting a single new cover and adjusting it to gross-weight trading, the industry might tend to deter further progress in packaging.

Question No. 3: How much can the industry afford to sacrifice in bale protection in order to have a cover that permits free transfer of moisture? During the testing program, it became apparent 100 per cent coverage with solid, moistureproof materials would not be feasible. A bale needed to be free to "breathe" so that it could reach equilibrium moisture content and any excess moisture inside the bale cover would work its way out.

One-Price Cotton System Favored

A "one-price" system making cotton available to domestic mills at the same price which foreign mills have been paying would bring equally phenomenal results as has been experienced this season, according to J. M. Cheatham, president of Dundee Mills Inc. of Griffin, Ga., in an address before the Agricultural Council of Arkansas. He said the textile industry was not advocating any particular cotton program but agrees that a one-price system and increased acreage would enable producers to "effect savings and efficiencies by reason of a larger crop." Mr. Cheatham said, "This season's large export sales have clearly demonstrated what can be done when competition has been met and I am bold enough to suggest that if this world price is made available to domestic mills, the results would be just as phenomenal."

May Rayon And Acetate Shipments Down

United States producers of rayon and acetate shipped a total of 90,400,0000 pounds of yarn and staple in May, 2½ per cent less than shipments in the previous month, according to the *Textile Organon,* statistical bulletin of the Textile Economics Bureau Inc. May shipments comprised 89,000,000 pounds to domestic consumers and 1,400,000 for export.

High tenacity rayon yarn shipments in May amounted to 29,600,000 pounds compared with 34,000,000 pounds in April, while regular+intermediate tenacity rayon yarn shipments came to 13,300,000 pounds, 4½ per cent more than the 12,700,000 shipped in April. Acetate yarn deliveries at 16,500,000 pounds were 8½ per cent above the 15,200,000 pounds shipped in April.

Rayon staple+tow shipments in May amounted to 26,200,000 pounds, about equal to April shipments; similarly, deliveries of acetate staple+tow at 4,800,000 pounds were unchanged from April. Rayon and acetate yarn and staple in the hands of producers at the end of May totaled 122,500,000 pounds, an increase of 5,800,000 pounds compared to end-of-April stocks.

The annual *Organon* survey of world man-made fiber production reveals that the output of rayon, acetate and non-cellulosic fibers totaled 5,929,000,000 pounds in 1956, a new world record exceeding the 1955 figure of 5,611,000,000 pounds by 5½ per cent. The latest yearly total included 5,245,000,000 pounds of rayon and acetate and 684,000,000 pounds of non-cellulosic fibers. Current world producing capacity for all man-made fibers is placed at 7,621,000,000 pounds and is scheduled to increase to 8,676,000,000 pounds annually by December 1958.

The *Organon* reports that the global output of rayon and acetate filament yarn last year totaled 2,233,400,000 pounds, a figure 2½ per cent below the 2,285,700,000 pounds produced in 1955. Rayon and acetate staple output last year aggregated 3,011,600,000 pounds, a gain of 10 per cent over the 2,743,300,000 pounds produced in 1955. Current world cellulosic staple+tow capacity is given as 3,745,000,000 pounds, and this capacity is expected to increase to 4,191,400,000 pounds by December 1958. The current world capacity for producing rayon and acetate filament yarn is placed at 2,861,200,000 pounds and by 1958 it is expected to increase to 3,050,700,000 pounds.

Total European output of rayon and acetate last year aggregated 2,833,400,000 pounds, a gain of 5 per cent over the 2,700,700,000 pounds produced on the continent in 1955. Western Germany continued as the largest producer in Europe with a total of 529,000,000 pounds, followed by the United Kingdom with 428,600,000 pounds, Italy with 325,900,000 pounds and France with 234,700,000 pounds. Western Germany showed a 6½ per cent gain over the previous year, and Italian output was up 12½ per cent, while the United Kingdom showed a decline of 1½ per cent and French production was off 3½ per cent.

For North America, the *Organon* data reveal that United States rayon and acetate production last year came to 1,147,900,000 pounds, a figure 9 per cent less than the 1,260,700,000 pounds produced in 1955. Declines in output took place in Canada and Mexico, while a slight increase took place in Cuba. In South America, 1956 rayon and acetate production at 139,300,000 pounds was 6½ per cent higher than in 1955. Brazil, with an output of 74,300,000 pounds, was the principal producer and showed a gain of 5½ per cent over the previous year.

Japan, with an output of 917,300,000 pounds, was the largest producer of rayon and acetate in the Far East and

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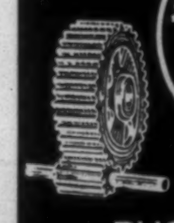

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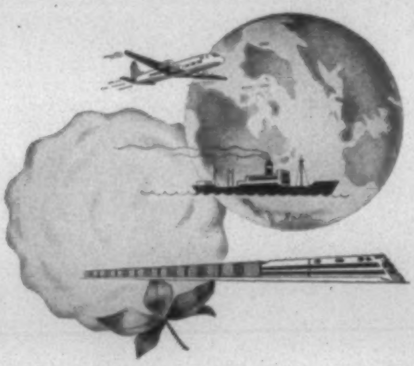

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the second largest producer in the world. In the rayon and acetate staple category, however, Japan stands first in the world with a 1956 production total of 689,900,000 pounds compared with the second place United States output of 389,300,000 pounds. Last year, according to the *Organon,* Japan showed a gain of 25½ per cent in rayon and acetate production over 1955 output of 732,100,000 pounds.

Man-made fiber output behind the Iron Curtain is estimated by the *Organon* to have totaled 807,700,000 pounds in 1956, including 766,300,000 pounds of rayon and acetate and 41,400,000 pounds of non-cellulosic fibers. In the rayon and acetate category, the *Organon* reports that the Iron Curtain countries produced 231,000,000 pounds of filament yarn and 535,300,000 pounds of staple+tow in 1956.

East Germany leads the Soviet Bloc countries in rayon and acetate output with a total of 270,500,000 pounds, followed by the U.S.S.R. with 260,000,000 pounds. However, the Soviet Union may pass East Germany in rayon and acetate production in the next few years, since her capacity is scheduled to increase to 400,000,000 pounds by December 1958 compared with 330,000,000 pounds for East Germany.

Poland is the third largest Eastern European producer of rayon and acetate with an output of 122,000,000 pounds in 1956, and that country's capacity is scheduled to increase to 175,000,000 pounds by late 1958. Czechoslovakia produced 106,800,000 pounds of cellulosic fibers in 1956, and capacity increases are planned which will enable her to produce 130,000,000 pounds by December 1958. Rumania and Hungary produced 5,000,000 and 2,000,000 pounds respectively in 1956 and their capacities are expected to be 8,000,000 and 2,000,000 pounds next year.

In the non-cellulosic man-made fiber category, the Soviet Union produced 25,000,000 pounds last year and has planned capacity increases which would enable that figure to be doubled by 1958. East Germany produced 12,400,000 pounds of non-cellulosic fibers last year and by 1958, her capacity is expected to rise to 20,000,000 pounds. Poland and Czechoslovakia with 1956 non-cellulosic production totals of 1,800,000 and 2,200,000 pounds respectively, will have the capacity to produce 7,000,000 pounds and 3,000,000 pounds.

To place the world output of man-made fibers in its proper perspective, the *Organon* has compiled comparable data for cotton, wool and silk. This compilation shows that world production of all these fibers in 1956 amounted to 26,677,000,000 pounds. Thus man-made fiber output at 5,929,000,000 pounds represented 22 per cent of the total. In the last decade, man-made fibers increased their share of total fibers by ten percentage points. On the other hand, cotton's share of the total declined from 72 per cent in 1946 to 67 per cent in 1956, and wool declined from 16 per cent in 1946 to 11 per cent in 1956.

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32—40" Saco-Lowell Cards, 12" coilers, 27" doffers, 100/110 wire, Abbington Stripper motions.
1—Complete Abbington Stripping System for 55 cards, has 5 stage 550-volt, 40 H.P. motor and pump, piping and tank.
2—10x5 Whitin-Woonsocket 1952 model G1OC Slubbers with Interdraft, 7½" gauge, 120 spindles each, Bijur lubrication system, single carriage.
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3—#102 Foster 120 spindle Winders, set up for 3-30 paper cones, double motor driven.

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SOUTHERN MILL SUPPLY COMPANY
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POSITION WANTED AS GENERAL OVERSEER OR PLANT SUPERINTENDENT. Yarn, twine or weaving mill. Practical experience on all phases of yarns and twine manufacturing, including tube twists and tufting yarns. Sober, dependable, alert, energetic, and in good health. Presently employed. Reply to Box "E. L. K.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED as General Overseer of Spinning or Assistant Superintendent yarn or weaving mill. Practical experience; familiar with all cotton mill processes and problems; sober; dependable. Have been employed steadily with some of the best mills. Presently employed. Personal reason for wanting to make a change. Reply to Box "O. R. T.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

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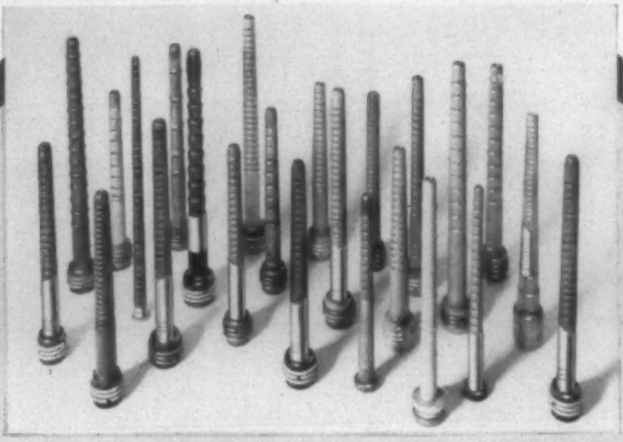
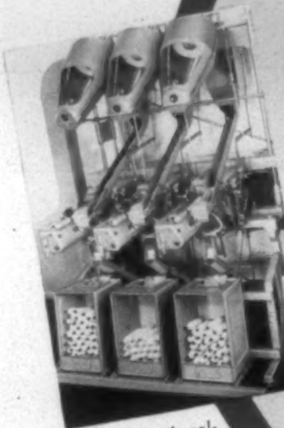
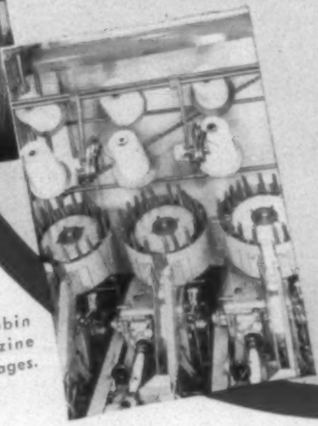


A few of the many types and sizes of filling bobbins that can be profitably run on the Fill-Master Winder.



Exhaust hoods and collectors for mills having dust and fly in winding area.



Multi-cell empty bobbin magazine for magazine creeling or single packages.

Packing device for orderly, clean storage of filled bobbins.

Pin boarding arrangement for synthetic yarns.

Only the Whitin-Schweiter FILL-MASTER* Filling Winder Gives you such Complete FLEXIBILITY and ADAPTABILITY

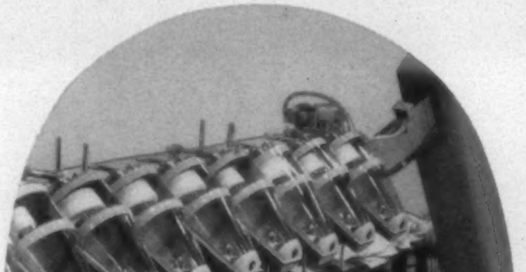
Flexible . . . . for fully automatic winding of cotton, wool, worsted, synthetics and blends.

Adaptable . . . to a broader range of mill requirements than any other winder thru its complete line of optional accessories (see illustrations)

These are only two of many outstanding advantages, including:

- Machine speeds up to 10,000 R. P. M.
- Speed of individual spindles adjustable
- Bobbins up to 10⅛"
- Tail-less bobbins
- Variable layer locking traverse prevents sloughing
- Maintains uniform winding diameters, resulting in more yardage per bobbin

*Trade Mark



Whitin-Schweiter Fill-Master* Winder with Bobbin Loader

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WHITINSVILLE, MASS.

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

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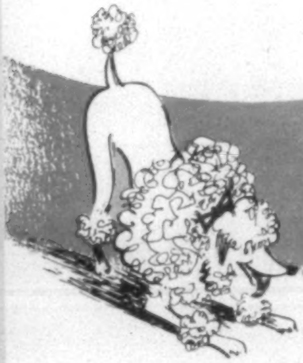


Here in one of the country's most modern and diversified knitting mills in Newtonville, Mass., every type of knitted fabric from jersey to Poodle Cloth rolls out under the mathematical eyes of Veeder-Root Counters.

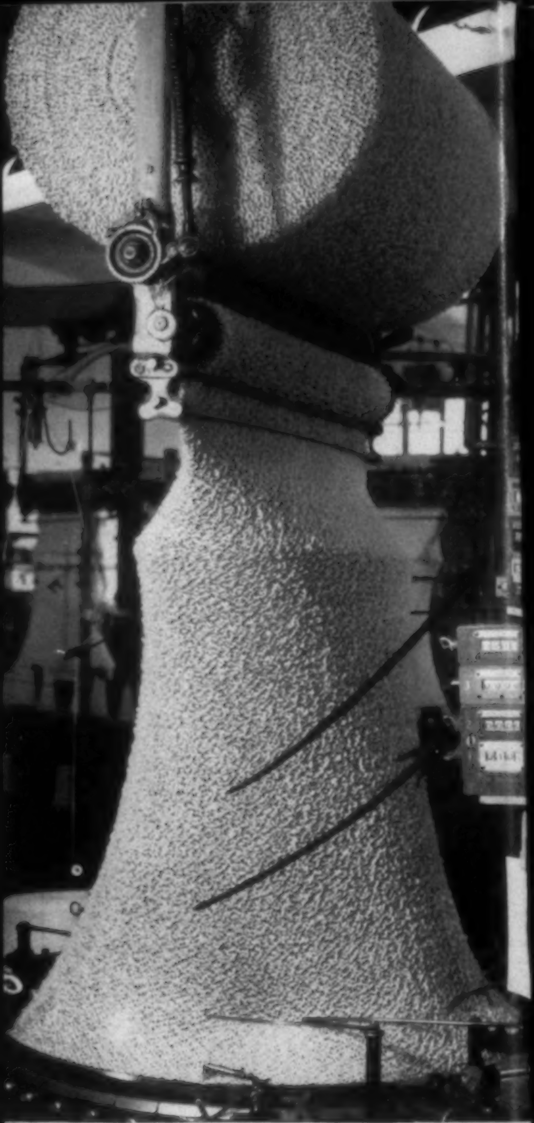
In fact, with the time-and-bonus incentive system used by Security, the counter records are absolutely indispensable to operation, since workers are paid "by the numbers." That's why you find, on every machine in the mill, a Veeder-Root Revolution Counter of the 2-3-4 Convertible type. And many machines also are equipped with Predetermining Counters which control machine-runs to the exact yardage required. When the pre-set figures are reached, the counters signal the operator or actuate a stop-motion. This prevents short runs and over-runs.

See what Veeder-Root *Count*rol can do to improve the operating efficiency and profit-position of *your* mill. Get in touch with your nearest Veeder-Root office, *today.*

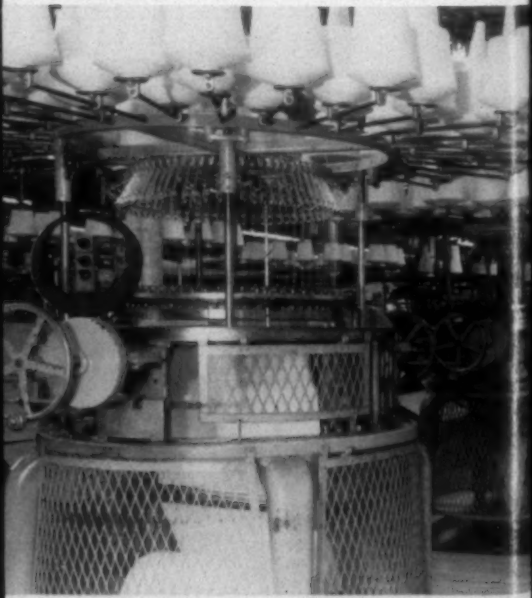
Veeder-Root
INCORPORATED
"THE NAME THAT COUNTS"

eeder-Root Medium Size Revolution Counter
Inspection Rolls.

Veeder-Root Predetermining Counter, with electrical relay, on Supreme Knitting Machine.



2-3-4 Veeder-Root Rev Counters, with Totalizers, on Cr
Knitting Machine.



2-3-4 Veeder-Root Rev Counters, with Totalizers, on Supr
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